

159
R35mEs
1896

THE DISEASES OF THE WILL.

BY TH. RIBOT.



LIBRARY
OF THE
UNIVERSITY
OF ILLINOIS

159

R35mEs

1896

The person charging this material is responsible for its return to the library from which it was withdrawn on or before the **Latest Date** stamped below.

Theft, mutilation, and underlining of books are reasons for disciplinary action and may result in dismissal from the University.

UNIVERSITY OF ILLINOIS LIBRARY AT URBANA-CHAMPAIGN

OCT 7 1975

SEP 15 1975

FEB 18 1976

FEB 18 1976

FEB 25 1976

JUN 9 1979

SEP 6 1980

DUE: 8-10-84

JAN 7 1985

L161—O-1096

159
R 35

THE
DISEASES OF THE WILL

LIBRARY
UNIVERSITY OF ILLINOIS
URBANA

BY
TH. RIBOT

PROFESSOR OF COMPARATIVE AND EXPERIMENTAL PSYCHOLOGY IN
THE COLLÈGE DE FRANCE

AUTHORISED TRANSLATION FROM THE EIGHTH FRENCH EDITION

BY
MERWIN-MARIE SNELL

SECOND ENLARGED ENGLISH EDITION

CHICAGO
THE OPEN COURT PUBLISHING COMPANY
(LONDON: 17 JOHNSON'S COURT, FLEET ST., E. C.)

1896

Y 62 081 0
081111 30 871567V110
X 62 081 0

COPYRIGHT BY
THE OPEN COURT PUBLISHING CO.
1894.

159

R35 m EA

1896

Recat 22 Apr. 57 Coldington

Je vous autorise
entièrement à publier cette traduction
et l'éditeur (M. Alcan) y consent
également

Ch. Bédou

40807

TABLE OF CONTENTS.

INTRODUCTION.

	PAGE
Statement of the question.—On the will as impulsive power.— On the will as inhibitory power.—Rôle of the individual character.—On choice ; its nature.....	I

CHAPTER I.

IMPAIRMENTS OF THE WILL. I. DEFECT OF IMPULSE.

Division of the diseases of the will.—On abulia, or incapacity for willing: example of Thomas De Quincy.—Case reported by Billod.—Probable causes of this state.—Two hypoth- eses : weakness of impulse, alteration of motor images ; comparison with psychic paralyses.—Analogous states ; agoraphobia ; doubting madness ; cases which border on extinction.—Incapacity for effort. Its two forms.—Where is its source ?	26
---	----

CHAPTER II.

IMPAIRMENTS OF THE WILL. II. EXCESS OF IMPULSE.

Sudden and unconscious impulses.—Irresistible impulses with consciousness.—Imperceptible transition from the healthy to the morbid state: fixed ideas.—Dislocation of the will.— Its probable causes.—Impairments by intoxication, by cerebral lesion.....	54
--	----

CHAPTER III.

IMPAIRMENTS OF VOLUNTARY ATTENTION.

Intellectual power and volitional impotence.—Coleridge : his portrait by Carlyle.—Two forms of impairment.—Nature of the attention. It has its source in the feelings.—How it is maintained.....	72
---	----

CHAPTER IV.

THE REALM OF CAPRICES.

	PAGE
Incapacity of the will to form itself : absence of its conditions of existence.—The hysterical character.—Whence the instability comes.....	86

CHAPTER V.

THE EXTINCTION OF THE WILL.

Two states of extinction.—Ecstasy. Its description by St. Teresa.—Anomaly of this mental state.—Somnambulism : cases of absolute extinction.—Doubtful cases. Examples of resistance.—Illusion of volitional power in some hypnotised persons.....	94
---	----

CONCLUSION.

The will is the final term of a progressive evolution of which the simple reflex is the first.—It is a hierarchic co-ordination.—Law of dissolution of the will : its course.—Verification by pathological facts.—Material conditions of volitional co-ordination. Its physiological development. Its psychological development. Principal forms of this co-ordination.—The will in <u>idiots</u> . The will is the result of a co-ordination and an <u>evolution</u> .—General conclusion : The will is a mere state of consciousness which has in itself no efficacy to produce a movement or an inhibition..	112
Index.....	135

THE DISEASES OF THE WILL.

INTRODUCTION.

IN recent years several authors, especially in foreign countries, have given a detailed exposition of certain branches of psychology according to the principle of evolution. It has seemed to me that there would be some profit in treating these questions in the same spirit, but under another form, that of *dissolution*.

I propose, then, in this work to attempt for the will what I have formerly done for the memory ; to study its anomalies, and to draw from this study conclusions regarding its normal state. In very many respects the question is less easy ; the term *will* designates something more vague than the term memory. Whether one considers memory as a function, a property, or a faculty, it remains none the less a stable mode of being, a psychic disposition, regarding which all the world can come to an agreement. The will, on the contrary, resolves itself into volitions, each one of which is an element, an unstable form of activity, a resultant varying according to the causes that produce it.

Beyond this first difficulty there is another which may appear greater still, but of which we will not hesitate to summarily disembarass ourselves. Can the pathology of the will be studied without touching upon the inextricable problem of free will? This abstention

appears to us possible and even necessary. It is imposed not by timidity, but by method. Like every other experimental science, psychology ought to rigorously forbid itself all research relative to first causes. The problem of free will is of this order. One of the great services of the criticism of Kant and his successors has been to show that the problem of liberty reduces itself to the question whether one can go outside the chain of effects and causes so as to posit an absolute beginning. That power "which calls up, suspends, or banishes," as it is defined by a contemporary who has studied it profoundly,* can be affirmed only on the condition of entering into metaphysics.

Here we have nothing of the sort to attempt. Experience, internal and external, is our sole object; its limits are our limits. We take the volitions as facts, with their immediate causes, that is to say, the motives which produce them, without investigating whether these causes suppose other causes *ad infinitum*, or whether there is added to them some degree of spontaneity. The question is thus placed in a form equally acceptable to the determinists and their adversaries, and reconcilable with either hypothesis. We hope, moreover, to conduct our researches in such a manner that the absence of any solution of this point will not even so much as once be noticed.

I shall try to show at the conclusion of this study that in every voluntary act there are two entirely distinct elements: the state of consciousness, the "I will," which indicates a situation, but which has in itself no efficacy; and a very complex psycho-physiological mechanism, in which alone resides the power to act or to restrain. As this general conclusion can only be the

*Renouvier, *Essai de critique générale*, second edition, i, 395-406.

result of partial conclusions furnished by pathology, I will avoid provisionally in this introduction any systematic view; I shall limit myself to studying the will in its double mechanism of impulse and inhibition, and in its source—the individual character—neglecting all the details which do not concern our subject.*

I.

The fundamental principle which dominates the psychology of the will under its impulsive form, in the healthy as well as in the morbid state, is that every state of consciousness always has a tendency to express itself, to manifest itself by a movement, an act. This principle is only one particular case, peculiar to psychology, of this fundamental law: that the reflex is the sole type of all neural action, of all relational life. Properly speaking, activity in the animal is not a beginning but an end, not a cause but an effect, not an initiation but a continuation. That is the most essential point, which must never be lost sight of and which alone explains the physiology and the pathology of the will, because this tendency of the state of consciousness to expend itself in a psychological or physiological act, conscious or unconscious, is the simple fact to which all the highest combinations and complications of voluntary activity are reducible.

The new-born child is, as Virchow has defined it, "a mere spinal being." Its activity is purely reflex, and manifests itself by such a profusion of movements

* There will be found in Schneider's recent work, *Der menschliche Wille vom Standpunkte der neueren Entwicklungstheorien* (Berlin, 1882), a good monograph on the will in its normal state and from the point of view of evolution. We regret not to have made its acquaintance before this work was almost completed.

that the work of education will consist for a long time in suppressing or restraining the greater number of them. This diffusion of reflexes, which has its ground in anatomical relations, manifests in all its simplicity the transformation of excitation into movement. Though they be conscious or awaken a rudiment of consciousness, in any case they do not represent a voluntary activity ; they properly express only the activity of the species, what has been acquired, organised and fixed by heredity ; but they are the materials out of which the will is to be built up.

Desire marks an ascending stage between the reflex and the voluntary conditions. We understand by desire the most elementary forms of the affective life, the only ones that can be produced so long as the intellect is not born. Physiologically they do not differ from reflex movements of a complex kind. Psychologically they differ from them only by the state of consciousness, often very intense, which accompanies them. Their tendency to express themselves in acts is immediate and irresistible, like that of reflexes. In the natural state, and in so far as it is yet free from all admixture, desire tends to satisfy itself immediately ; that is its law, it is inscribed in the organism. Little children and savages furnish excellent examples of it. In the adult, desire is no longer in the natural state ; education, habit, and reflexion modify or restrain it. But it often reasserts its rights, and history shows us that in the case of despots, placed by their own opinion and that of others above the law, it always retains them.

Pathology will show us that this form of activity is augmented when the will grows weak, and persists when it disappears. It marks, however, a progress

beyond the first period, for it denotes a commencement of individuality. On the common ground of the specific activity, the desires outline vaguely the individual character ; they reflect the mode of reaction of a particular organism.

As soon as a sufficient accumulation of experiences has permitted intellect to arise, there is produced a new form of activity, for which the epithet of *ideomotor* is most convenient, ideas being causes of movements. That name has, moreover, the advantage of showing its relationship with reflexes, of which it is only an improvement.

How can an idea produce movement? That is a question which very much embarrassed the old psychology, but which becomes simple when the facts are considered in their true nature. It is a truth now accepted in cerebral physiology that the anatomical basis of all our mental states includes both motor and sensory elements. I will not dwell upon a question which has been treated elsewhere in detail* and would necessitate a digression. Let us simply remember that our perceptions, in particular the important ones, those of sight and touch, imply as integral elements movements of the eye or the members ; and that if movement is an essential element when we see an object really, it must play the same rôle when we see it ideally. Images and ideas, even abstract, suppose an anatomical substratum in which the movements are in some measure represented.

It is true that, on pressing the point more closely, it might be said that it is necessary to distinguish two kinds of motor elements : those which serve to constitute a state of consciousness, and those which serve to

* *Revue philosophique*, October, 1879, p. 371, et seq.

expend it ; the first intrinsic, the others extrinsic. The idea of a ball, for example, is the resultant of impressions of surfaces and of special muscular adjustments ; but the latter are the result of muscular sensibility, and, in this aspect, are sensations of movement rather than movements properly so called ; they are constituent elements of our idea rather than a manner of expressing it outwardly.

At the same time, this close relation established by physiology between the idea and the movement permits us in some degree to perceive how one produces the other. In reality, an idea does not produce a movement : that sudden and remarkable change of function would be a marvellous thing. The sudden production of a play of the muscles by an idea, such as defined by metaphysicians, would be scarcely less than a miracle. It is not the state of consciousness as such, but rather the corresponding physiological state which transforms itself into an act. In short, the relation is not between a psychical event and a movement, but between two states of the same kind, between two physiological states, two groups of nervous elements, one sensory and the other motor. If one insists upon making of consciousness a cause, all remains obscure ; but if it is considered as simply the accompaniment of a nervous process, which alone is the essential element, all becomes clear and the imaginary difficulties vanish.

This admitted, we can classify ideas roughly into three groups, according as their tendency to transform themselves into action is strong, moderate, or weak and even, in a certain sense, null.

1) The first group includes extremely intense intellectual states, of which fixed ideas may serve as a

type. They pass into action with a fatality and rapidity almost equal to those of reflexes. These are the ideas which "take hold of us." The old psychology, affirming a fact of common experience, said in its own language that the intellect acts upon the will only through the mediation of sensibility. Leaving aside those entities, this signifies that the nervous state corresponding to an idea expresses itself so much the better in movements according as it is accompanied by those other nervous states, whatever they may be, which correspond to sentiments. The phraseology thus changed, it can be understood why, in the case before us, we are so near the preceding phase, and why the nervous action is more energetic and affects a greater number of elements.

Most of the passions, as soon as they transcend the level of mere appetite, enter into this group as principles of action. The whole difference is one of degree, according as the affective elements predominate in the complex thus formed or the reverse.*

41 2) The second group is the most important for us. It represents the rational activity, the will in the usual sense of the word. The conception is followed by an act after a short or long deliberation. It will be found, upon reflexion, that the greater part of our actions fall under this type, leaving aside habits and the forms already described. Whether I rise up in order to take

* The relative independence of the idea and the feeling as causes of movement is clearly established by certain pathological cases. It sometimes happens that the idea of a movement is by itself alone incapable of producing it, but if emotion ensue it is produced. A man stricken with paralysis cannot move his arm by any effort of will; while it will be observed to be violently agitated under the influence of an emotion caused by the arrival of a friend. In cases of softening of the spinal marrow inducing paralysis, an emotion, or a question addressed to the patient, may cause most violent movements in the lower members over which his will has no control.

the air at my window or enlist in order to become one day a general, there is only the difference between a less and a greater, a volition very complex and at long range like the last necessarily resolving itself into a series of simple volitions successively adapted to times and places.

In this group the tendency to the act is neither instantaneous nor violent. The concomitant affective state is moderate. Very many actions which form the ordinary routine of our life were at first accompanied by a feeling of pleasure, curiosity, etc. Now the primitive sentiment has become enfeebled, but the bond between the idea and the act has been established; when the one arises the other follows.

3) In abstract ideas, the tendency to movement is at its minimum. These ideas being representations of representations, pure schemata, extracts fixed by a symbol, the motor element is diminished in the same degree as the representative element. If all the forms of activity which we have just passed in review be considered as successive complications of the simple reflex, we might say that abstract ideas are a collateral ramification, which is attached feebly to the principal trunk, and has developed in its own way. Their motor tendency is reduced to that interior utterance, slight as it may be, which accompanies them, or to the awakening of some other state of consciousness. For just as in physiology the centrifugal period of a reflex does not always end in a movement, but as likely in the secretion of a gland or a trophic action; in the same way, in psychology, a state of consciousness ends not always in a movement but in the resurrection of other states of consciousness according to the well-known mechanism of association.

The contrast so often noted between the speculative minds that dwell among abstractions, and practical people, is only the visible and palpable expression of those psychological conditions that we have just pointed out. Let us recall again, by way of elucidation, a few well-worn truths: the difference between knowing the good and practising it, seeing the absurdity of a belief and getting rid of it, condemning a passion and renouncing it. All this is explained by the extremely feeble motor tendency of an isolated idea. We are ignorant of the anatomical and physiological conditions necessary for the production of an abstract idea, but we can affirm without temerity that by the time it becomes a motive of action other elements are added to it; which happens with those who "are devoted to an idea." (Man is led by his feelings alone.)

II.

In the light of the preceding observations, voluntary activity appears to us as a stage in that ascending evolution which goes from the simple reflex, whose tendency to movement is irresistible, to the abstract idea, where the tendency to act is at its minimum. Neither the commencement nor the end can be rigorously fixed, the transition from one form to the other being almost insensible.

Designedly, and for the sake of clearness, we have not examined the problem in all its complexity. We have even eliminated one of the essential and characteristic elements of will. As it has hitherto been considered it might be defined: A conscious act more or less deliberate, in view of an end simple or complex, near or remote. It is thus that contemporary authors

such as Maudsley and Lewes appear to understand it, when they define it as "impulse by ideas" or "the motor reaction of feelings and ideas." Thus understood, volition would simply be a *laissez-faire*. But it is quite another thing. It is also a power of arrestation, or, in the language of physiology, an *inhibitive* power.

For the psychology founded upon interior observation alone, this distinction between permitting and preventing has little importance; but for the psychology which asks from the physiological mechanism some enlightenment on the operations of the mind,—and which considers the reflex as the type of all activity,—it is of capital importance.

The prevailing doctrine supposes that the will is a fiat which the muscles obey, one knows not how. In this hypothesis, it matters little whether the fiat commands a movement or a cessation of movement. But if it be admitted, with all contemporary physiologists, that the reflex is the type and basis of all action, and if, consequently, there is no room to inquire why a state of consciousness transforms itself into movement, since that is the law, it must be explained why it does not so transform itself. Unhappily physiology is full of obscurities and indecisions upon this point.

The most simple case of the phenomenon of stopping or inhibition consists in the suspension of the movements of the heart by an excitation of the pneumogastric or vagus nerve. The heart is known to be innervated, independently of the intra-cardiac nerve-ganglia, by filaments coming from the great sympathetic, which accelerate its pulsations, and by filaments from the vagus.

The section of these last augments the movements;

the excitation of the central terminus, on the contrary, suspends them for a longer or shorter time. It is then a nerve of arrestation, and the inhibition is generally considered as the result of an interference. The reflex activity of the cardiac centres is retarded or suspended by the excitations coming from the medulla. In other words, the motor action of the pneumogastric expends itself in the cardiac centres which are in a state of activity, and produces an inhibition. All this has no immediate psychological bearing, but here is something that concerns us more.

It is a well-known fact that the reflex excitability of the spinal cord increases when it is withdrawn from the action of the brain. The condition of decapitated animals furnishes striking proofs of it. Without having recourse to these extreme cases, we know that reflexes are much more intense during sleep than in the waking state. In order to explain this fact some authors have supposed the existence in the brain of centres of arrest. Setschenow placed them in the optic thalami and the region of the corpora quadrigemina. He relied upon the fact that by exciting those parts by chemical or other means he produced a depression of reflex activity. Goltz places these inhibiting centres in the brain proper.

These and other analogous hypotheses* have been very much criticised, and many physiologists suppose merely that in the normal state the excitations distribute themselves at the same time in the brain by an ascending course, and in the spinal cord by a transverse course ; and that, on the contrary, in cases where

* For the complete history of the question may be consulted Eckhard, *Physiologie des Rückenmarks*, in Hermann's *Physiologie* (Leipsic, 1879), vol. ii, part ii, p. 33 et seq., where will be found the experiments and interpretations of Setschenow, Goltz, Schiff, Herzen, Cyon, etc., etc.

the brain can play no part, the excitations finding only a single way open there thence results a sort of accumulation, the effect of which is an exaggerated reflex excitability.

Recently, Ferrier,* placing himself at a point of view the psychological importance of which is evident, has supposed the existence in the frontal lobes of moderating centres, which would be the essential factor of attention.

Without entering into more details, it is seen that for the explanation of the mechanism of inhibition there is no clear and universally accepted theory like that for the reflexes. Some suppose that the arrestation comes from two contrary tendencies which impede or annihilate each other. Others postulate inhibiting centres, and even inhibiting nerves, capable of suppressing a transmitted action instead of reinforcing it. There are still other hypotheses, which it is useless to mention.† In this state of ignorance let us examine the question as best we may.

In all voluntary inhibition there are two things to be considered : the mechanism that produces it, of which we have just spoken ; and the state of consciousness that accompanies it, of which we are now to speak.

In the first place, there are cases where the arrestation does not need to be explained, those in which the voluntary incitation ceases of itself ; when we throw aside, for example, a decidedly tiresome book.

Other cases appear to be explainable by one of the hypotheses given above. We voluntarily arrest laughter, yawning, coughing, and certain passionate move-

* Ferrier (David), *The Functions of the Brain* (New York, 1886), pp. 103, 104.

† See Wundt (Wilhelm), *Mechanik der Nerven* (Stuttgart, 1876), part ii, p. 84, et seq.; Lewes, *Physical Basis of Mind*, pp. 300-301.

ments, by putting in action, as it would seem, the antagonistic muscles.

In the cases where we do not know how the inhibition is produced, where the physiological mechanism remains unknown, pure psychology can still teach us something. Let us take the most commonplace example: a fit of anger stopped by the will. In order not to exaggerate the voluntary power, let us remark in the first place that this restraint is far from being the rule. Certain individuals appear altogether incapable of it. Others are so very unequally; their restraining power varies according to the time and the circumstances. Very few are always masters of themselves.

There is necessary for the production of the restraint one first condition: time. If the incitation be so violent that it passes immediately into action, all is over; whatever folly ensues, it is too late. If the condition of time be fulfilled, if the state of consciousness give rise to antagonistic states, if these be sufficiently stable, the restraint takes place. The new state of consciousness tends to suppress the other, and, by enfeebling the cause, checks the effects.

It is of prime importance for the pathology of the will to investigate the physiological phenomenon which occurs in such a case. There can be no doubt that the quantity of the nervous influx (whatever opinion may be held as to its nature) varies from one individual to another, and from one moment to another in the same individual. Neither can it be doubted that at a given moment in any particular individual the disposable quantity may be distributed in a variable manner. It is clear that in the metaphysician who is speculating, and the man who is satisfying a physical passion, the

quantity of nervous influx is not expended in the same manner, and that one form of expenditure prevents the other, the disposable capital not being able to be employed at the same time for two different purposes.

✓ “We see,” says a physiologist,* “that the excitability of certain nervous centres is reduced by calling certain others into action, if the excitations which reach the latter possess a certain intensity; such is the fact.

“If we consider the normal functioning of the nervous system, we observe that there exists a necessary equilibrium between its different structures. We know that this equilibrium can be broken only by the abnormal predominance of certain centres, which seem to divert to their own profit too large a part of the nervous activity; thenceforth the functioning of the other centres shows itself to be disturbed. . . . There are general laws which preside over the apportionment of the nervous activity in the different points of the system, as there are mechanical laws governing the circulation of the blood in the vascular system; if a great perturbation arises in an important vascular department, the effect cannot fail to be felt at all other points in the system. These laws of hydrodynamics we perceive, because the fluid in circulation is accessible to us, and we know the properties of the vessels that contain it, and the effects of elasticity, muscular contraction, etc. But the laws of the distribution of nervous activity, of that species of circulation of what has been named the nervous fluid,—who knows them? We observe the effects of rupture of the equilibrium of

* Franck (François), *Dictionnaire encyclopédique des sciences médicales* (Paris, 1878), art. “Nerveux,” p. 572.

nerve-action, but they are essentially variable disturbances, which still refuse to lend themselves to any theory. We can only take note of their production, and keep account of the conditions that accompany them."

If we apply these general considerations to our particular case, what do we see? The original state of consciousness (anger) has awakened antagonistic states, varying necessarily from one man to another: the idea of duty, or the fear of God, of opinion, of the laws, of disastrous consequences, etc.

There is thus produced a second centre of action, that is to say, in physiological terms, a derivation of the nervous afflux, an impoverishment of the first state to the profit of the second. Is this derivation sufficient to re-establish the equilibrium? The event alone gives the answer.

But when the inhibition takes place it is never more than relative, and its only result is to lead to a diminished action. What remains of the original impulse expends itself as it can, by half-restrained gestures, visceral agitations, or some artificial derivation, as in the case of the soldier who while he was being shot chewed a bullet, so that he might not cry out. Very few are sufficiently well endowed by nature and fashioned by habit as to reduce the reflexes to imperceptible movements. This derivation of the nervous influx is not then a primitive fact, but a state of secondary formation, established at the expense of the first by means of an association.

Let us remark again that, besides the birth of these two antagonistic centres of action, there are other causes which tend to enfeeble directly the primitive impulses.

But we ought here to examine the difficulty more closely, for the co-existence of these two contrary states of consciousness,* though sufficient to produce indecision, uncertainty, and inaction, is not enough to cause a voluntary arrestation, in the real sense of the word, an "I will not." A further condition is necessary. It is found in an affective element of the highest importance of which we have said nothing. Feelings are not all stimulants to action. Many of them have a *depressive* character. Terror may be considered as their extreme type. In its highest degree its effect is prostrating. A man suddenly stricken with a great sorrow is incapable of any reaction, voluntary or reflex. The cerebral anæmia, the arresting of the heart sometimes bringing on death by syncope, the perspiration with coldness of the skin, the relaxation of the sphincters : all shows that the excitability of the muscular, vasomotor, secretory, and other centres is temporarily suspended. This case is extreme, but it gives an enlargement to our view. Below it we have all possible degrees of fear, with all the corresponding degrees of depression.

Descending from this maximum to moderate fear, the depressive effect diminishes, but without changing in nature. Pray how are the movements of anger stopped in the child? By threats and reproofs ; that is to say, by the production of a new state of consciousness of a depressive character, and calculated to paralyse the action. "A child of three months and a half," says B. Perez, "understands, from the expression of the countenance and the tone of the voice, that it is being reprimanded ; then its forehead contracts, its lips twitch

* It is well understood that we do not separate them from their physiological conditions, which are the principal element.

convulsively and pout an instant, its eyes become moist with tears, and it is on the point of sobbing."*

The new state tends, then, to supplant the other, not only by its own strength, but by the enfeeblement that it inflicts upon the entire being.

If, in spite of repeated menaces, the inhibition be not produced, the individual is little or not at all educable in this respect. If it be produced, the result is that, in virtue of a well-known law, an association tends to be established between the two states; the first awakens the second,—its corrective,—and, by habit, the restraint becomes more and more easy and rapid. In those who are masters of themselves the restraint takes place with that certainty which is the mark of every perfect habit. It is clear, moreover, that the temperament and the character are of yet more significance here than education.

It is then not surprising that a tempest should give way before cold ideas, before states of consciousness whose motor tendency is quite weak; it is because there is behind them an accumulated, latent, unconscious force, such as we have just observed.

For an understanding of this apparent miracle, the educated and reflecting adult must not be considered, but the child. With the latter (the savage, and the unpolished or uneducable man approximate to it) the tendency to act is immediate. The work of education consists precisely in arousing these antagonistic states; and by education must be understood that which the child owes to its own experience as well as that which it receives from others.

I believe it needless, moreover, to point out that

* Bernard Perez, *Les trois premières années de l'enfant*, p. 33. Translated by Alice M. Christi, *The First Three Years of Childhood* (London, 1885), p. 29.

all the sentiments which produce an arrest : fear or respect for persons, laws, customs, or God, have been in origin and always remain depressive states, tending to diminish action.

In short, the phenomenon of inhibition can be explained in a way sufficient for our purpose, by an analysis of the psychological conditions under which it is produced, whatever opinion one may have regarding the physiological mechanism. It would doubtless be desirable to see into it more distinctly, to have a clearer idea of the *modus operandi* by which two nearly simultaneous excitations neutralise each other. If this obscure question were settled our conception of the will as a restraining power would become more precise, and perhaps be greatly modified. We must resign ourselves to waiting ; we shall, moreover, meet with this most difficult problem again, in other forms.

III.

We have hitherto considered the voluntary activity under an exclusively analytical form, which is unable to give an exact idea of it, or show it in its totality. It is neither a simple transformation of some states of consciousness or other into movement, nor a simple power of restraint ; it is the distinctive reaction of an individual. We must insist upon this point, without which the pathology is incomprehensible.

The first characteristic of voluntary movements is that they are *adapted* ; but this is a mark they have in common with the immense majority of physiological movements ; the difference is only in degrees.

Leaving aside the movements of a pathological order (convulsions, St. Vitus's dance, epilepsy, etc.) which

occur in the form of a violent and irregular discharge, adaptation is to be met with from the lowest to the highest.

Ordinary reflexes are reactions of the spinal cord, adapted to conditions which are very general, and consequently very simple, uniform, and invariable from one individual to another (save in exceptional cases). They have a *specific* character.

Another group of reflexes represents the reactions of the base and the medial portion of the encephalon, —the medulla, corpora striata, and optic thalami. These reactions also are adapted to general conditions which are only slightly variable, but of an order very much more complex: it is the “sensory-motor” activity of certain authors. They have still a character rather more specific than individual, so great is their resemblance in different individuals of the same species.

Cerebral reflexes, especially the highest, consist in a reaction adapted to conditions which are very complex, very variable, very unstable, differing from one individual to another, and from one instant to another in the same individual. These are the ideo-motor reactions, the volitions. However perfect it may be, this adaptation is still not the thing that is of importance to us. It is only an effect, the cause of which is not volition but intellectual activity.

The intellect being a correspondence, a continual adjustment of internal to external relations, and in its highest form a perfectly co-ordinated adjustment; the co-ordination of these states of consciousness implies that of the movements which express them. As soon as an end is chosen, it acts after the manner of what metaphysicians call a final cause: it brings about the selection of the means proper for attaining it. The

adaptation is then a result of the mechanism of the intellect. We need not dwell upon this point.

But what interests us is this *choice*, this preference declared after a longer or shorter comparison of motives. It is this that represents the individual reaction, which is distinct from the specific reactions, and, as we shall see in the pathology, sometimes inferior, sometimes superior to them.

What is this choice? Considered in its form, it is nothing more than a *practical* affirmation, a judgment that accomplishes itself. Let it be well remarked: From the physiological and exterior side nothing distinguishes a voluntary movement from an involuntary one; the mechanism is the same, whether I wink my eye by reflex action or designedly in order to warn an accomplice.* From the psychological and interior side nothing distinguishes the judgment, in the logical sense of the word, that is, a theoretical affirmation, from volition; except that the latter expresses itself by an act, and is thus a judgment put in execution.

But what is it, considered in its essence instead of in its form? Let us dwell upon this fundamental point and try to clear it up. By descending to some very lowly biological facts, we shall perhaps see better in what a choice consists. In order not to lose myself in remote analogies, I will say nothing of physical affinity (for example, that of the magnet for iron). In the vegetable kingdom, I will simply recall that the insectivorous plants, like the *Dionæa* (Venus's fly-trap),

*In physiology a distinction is made between voluntary and involuntary muscles, although it is understood that this distinction has in it nothing absolute. There are persons, like the physiologist E. F. Weber, who can at will stop the motions of their heart; others, like Fontana, can produce a contraction of the iris, etc. A movement is voluntary, when, as a result of successive and repeated efforts, it is linked to a state of consciousness and under its control.

select certain bodies which come into contact with them to the exclusion of others. The amœba chooses in the same way certain organic fragments, with which it nourishes itself. These facts are incontestable, but their interpretation is difficult. They are explained, in general, by a relation of molecular composition between what chooses and what is chosen. Without doubt, choice is here exerted in a very limited field ; but it is also no more than its rudest form, almost physical. By the origin and development of a more and more complex nervous system, this blind affinity is developed into a conscious tendency, then into several contradictory tendencies, one of which prevails—that which represents the *maximum* of affinity (the dog which hesitates between several messes and ends in choosing one). But in all cases choice expresses the nature of the individual, at a given minute, under given circumstances, and in a given degree ; that is to say, the more feeble the affinity the less marked is the preference. Hence we are able to say that choice, let it result from a single tendency, from several tendencies, from a present sensation, from images recalled, from complex ideas, or from complicated calculations reaching out into futurity, is always founded on an affinity, an analogy of nature, an adaptation. This is true in the case of the animal, lower or higher, and of man, for vice or virtue, for science or pleasure or ambition. To limit ourselves to man, two or more states of consciousness arise as possible ends of action ; after some oscillations, one is preferred, chosen. Why, if not because that between that state and the sum of conscious, sub-conscious, and unconscious (purely physical) states which at the moment constitute the person, the ego, there is conformity, analogy of nature, affinity? This

is the only possible explanation of choice, unless to admit that it is without cause. It is proposed to me to kill a friend ; this tendency is repulsed with horror, excluded ; that is to say, it is in contradiction with my other tendencies and sentiments, there is no possible association between it and them, and by that very fact it is annihilated.

In the criminal, on the contrary, there is established between the representation of murder and the feelings of hatred or cupidity a bond of congruity, that is to say, of analogy ; it is consequently chosen, affirmed as having ought to be. *Considered as a state of consciousness, volition is, then, nothing more than an affirmation* (or a negation). It is analogous to the judgment, with this difference, that one expresses a relation of congruity (or incongruity) between ideas, the other the same relation between tendencies ; that one is a repose for the mind, the other a stage on the way to action ; that one is an acquisition, the other an alienation ; for the intellect is an economy, and the will an expenditure. But volition by itself, *as a state of consciousness*, has no more efficacy to produce an act than a judgment to produce truth. The efficacy comes from elsewhere. We will return in the conclusion to this very important point.* The ultimate reason of the choice is then in the character, that is to say, in what constitutes the peculiar mark of the individual in the

*We have just expressed under another form this evident fact that the choice proceeds always in the direction of the greatest pleasure. No animal, endowed with reason or deprived of it, healthy or diseased, can will anything but what *seems* to it at the moment its greatest good or its least ill. Even the man who prefers death to dishonor or apostasy chooses the least disagreeable part. The individual character and the degree of development of the reason cause the choice sometimes to mount very high, sometimes to fall very low ; but it always tends towards what pleases the most. The contrary is impossible. That is a psychological truth so clear that the ancients had already laid it down as an axiom, and it has taken volumes of metaphysics to obscure it.

psychological sense and differentiates him from all other individuals of his species.

The character, or, to employ a more general term, the person, the ego, which is to us a cause, is it in its turn an effect? No doubt; but we need not occupy ourselves here with the causes which produce it. The science of character, which John Stuart Mill called for, more than forty years ago, under the name of ethology, is not yet in existence, nor is it, it seems to me, near to being formed. Were it so, we should only have to accept its results, without attempting an excursion into its domain; for to ascend forever from effects to causes, in an endless progression, would be to follow the vagaries of metaphysics. Yet again, for the subject which occupies us, the character is an ultimate fact, a true cause, even though for investigations of another kind it be an effect. Let us remark in passing, and merely by way of suggestion, that the character—that is to say, the ego, in so much as it reacts—is an extremely complex product, that heredity, pre-natal and post-natal physiological conditions, education, and experience have contributed to form. It can be stated also without temerity, that what constitutes it are much rather affective states, a peculiar manner of feeling, than an intellectual activity. It is this general manner of feeling, this permanent tone of the organism, which is the first and true motor. If it is lacking, man can no more will; pathology will show us this. It is because this fundamental state is, according to the constitution of the individuals, stable or fluctuating, continuous or variable, energetic or feeble, that there are three principal types of will, strong, weak, and intermittent, with all the degrees and shades of which these types admit; but, we again repeat,

these differences arise from the character of the individual, which depends upon his special constitution; there is nothing to be sought for beyond that.

We are, then, completely in accord with those who deny that the predominance of one motive is sufficient to explain volition. The preponderating motive is but a part of the cause, and always the least, although the most visible; and it only has efficacy in so far as it is chosen, that is to say, as it enters as an integral part into the sum of states which constitute the ego at a given moment, and as its tendency to act is added to that group of tendencies which spring from the character, to be consolidated with them. It is then in no wise necessary to make of the ego an entity, or to place it in a transcendental region in order to recognise in it a true causality. It is a fact of experience, very simple, very clear; the contrary is not comprehensible.

Physiologically, this signifies that the voluntary act differs both from the simple reflex, where a single impression is followed by a single contraction, and from more complex forms, where a single impression is followed by a number of contractions; that it is the result of the entire nervous organisation, which itself reflects the nature of the whole organism and reacts in consequence. Psychologically, it signifies that the voluntary act, in its complete form, is not the simple transformation of a state of consciousness into movement, but that it supposes the participation of the whole group of conscious or sub-conscious states which constitute the ego at a given moment.

We are therefore justified in defining the will to be an individual reaction, and in holding it for that which is the very inmost in us. The ego, although an effect,

is a cause. It is so in the most rigorous sense, in such a way as to satisfy all exigencies.

To sum up, we have seen that from the lowest reflex to the highest will, the transition is insensible, and that it is impossible to say exactly at what moment there commences the volition proper, that is to say, the personal reaction. From one extreme of the series to the other, the difference is reduced to two points : on one hand, an extreme simplicity; on the other, an extreme complexity;—on one hand, a reaction always the same in all the individuals of the same species ; on the other, a reaction which varies according to the individual, that is to say, according to a particular organism limited in time and space. Simplicity and permanence, complexity and mutation, go together.

It is clear that, from the point of view of evolution, all reactions have been in their origin individual. They have become organic, specific, by numberless repetitions in the individual and the race. The origin of will is in the property which living matter has of reacting, its end is in the property which living matter has of acquiring habits; and it is that involuntary activity forever fixed which serves as support and instrument to the individual activity.

But among the higher animals the hereditary legacy, the accidents of birth, the continual adaptation to conditions varying at every instant, do not permit the individual reaction to become fixed or to take the same form in all individuals. The complexity of their environment is a safeguard against automatism.

We here bring to an end these preliminaries, with the reminder that their single aim was to prepare for the pathological study upon which we are now to enter.

CHAPTER I.

IMPAIRMENTS OF THE WILL. I. DEFECT OF IMPULSE.

We have seen that this term *will* applies to acts which differ considerably in regard to the conditions of their genesis, but which all have this character in common, of being, in some form and degree, a reaction of the individual. Without returning to that analysis, let us note, for the sake of clearness and precision, two exterior characters by which true volition is recognisable: it is a definitive state; it expresses itself by an act.

Irresolution, which is the beginning of a morbid state, has interior causes that pathology will enable us to understand: it arises from the weakness of the incitations or from their ephemeral action. Among irresolute characters, some—a very small number—are so on account of a wealth of ideas. The comparison of motives, reasoning, the calculation of consequences, constitute an extremely complex cerebral state wherein the tendencies to action counteract one another. But this opulence of ideas taken alone is not a sufficient cause of irresolution; it is only an adjuvant cause. The true cause here as everywhere is in the character.

In the irresolute who are poor in ideas, this can be seen more clearly. If they act it is always in the di-

rection of the least action or of the most feeble resistance. Deliberation leads with difficulty to choice, and choice with more difficulty to an act.

Volition, on the contrary, is a definitive state; it closes the debate. By its means a new state of consciousness—the selected motive—enters into the ego as an integral portion to an exclusion of other states. The ego is thus constituted in a set manner. In fickle natures this definitive state is always provisional, that is to say, the willing ego is so unstable a compound that the most insignificant state of consciousness that may spring up modifies or wholly changes it. The compound formed at each instant has no force of resistance at the instant which follows. In that sum of conscious and unconscious states which from moment to moment represents the causes of volition, the part played by the individual character is a minimum, the share of the exterior circumstances a maximum. We fall back into that inferior form of volition studied above which consists in a “letting go.”

After all it must never be forgotten that to will is to act, that volition is a transition to action. To reduce the will, as has sometimes been done, to a simple resolution, that is, to the theoretical affirmation that a thing is to be done, is to content oneself with an abstraction. Choice is but one stage in the process of volition. If it does not translate itself into action, immediately, or in due time, there is no longer anything to distinguish it from a logical operation of the mind. It resembles those written laws which are not enforced.

These remarks made, we enter upon the domain of pathology. We may divide the diseases of the will into two great classes, according as it is *impaired* or *extinguished*.

The impairments of the will constitute the most important part of its pathology ; they show the mechanism out of order. We shall subdivide them into two groups.

1. Impairment by defect of impulse ;
2. Impairment by excess of impulse.
3. Because of their importance we shall examine separately the impairments of voluntary attention.
4. Finally, under the title of "The Realm of Caprices," we shall study a peculiar state in which the will never succeeds in forming itself, or does so only by accident.

I.

The first group contains facts of a simple and clear character, the examination of which is instructive. In the normal state a suggestion of it is found in those easy-going characters who, in order to act, need to have another will added to their own ; but disease will show us this state prodigiously exaggerated.

Guislain has described in general terms that impairment which physicians designate by the name of *abulia*. "The patients know how to will interiorly, mentally, according to the dictates of reason. They may experience the desire to do something, but are powerless to act accordingly. There is at the bottom of their understanding an incapacity. They would wish to work and they cannot. . . . Their will cannot go beyond certain limits ; one would say that this power of action undergoes an inhibition : the *I will* does not transform itself into impelling volition, into active determination. Some patients are themselves astonished at the impotence with which their will is stricken. . . . When they are left to themselves they

pass entire days in their bed or on a chair. When any one addresses and arouses them, they express themselves suitably, although in a short manner; and they judge of things fairly well.”*

As those patients whose intellect is intact are the most interesting, we shall cite only cases of this kind. One of the oldest and best-known observations is due to Esquirol :

“A magistrate, very distinguished for his learning and power of language, was, as a result of troubles, attacked with a fit of monomania. . . . He has recovered the entire use of his reason; but he will not go into the world again, although he recognises that he is wrong; nor take care of his business, although he knows well that it suffers on account of his whim. His conversation is both rational and clever. When one speaks to him of travelling, or of looking after his affairs, he answers: ‘I know that I ought to do it, and yet I cannot. Your counsels are very good; I would like to follow your advice. I am convinced, but only make me able to will with that volition which determines and executes.’ ‘It is certain,’ he said to me one day, ‘that I have no will except not to will; for I have all my reason; I know what I ought to do; but strength fails me when I ought to act.’ ”†

The English Dr. Bennett reports the case of a man “who frequently could not carry out what he wished to perform. Often, in endeavoring to undress, he was two hours before he could get off his clothes, all his mental faculties, volition excepted, being perfect. On

* Joseph Guislain, *Leçons orales sur les phrénopathies* (Paris, 1880), vol. i, pp. 256, 479. See also Wilhelm Griesinger, *Traité des maladies mentales* (translated from the German by Dr. Doumie, Paris, 1865), p. 86; Leubuscher, *Zeitschrift für Psychiatrie*, iv, 1847, “Ueber Abulie,” pp. 562-578.

† E. Esquirol, *Des maladies mentales* (Paris, 1838), i, 421.

one occasion, having ordered a glass of water, it was handed to him on a tray, but he could not take it, although anxious to do so; he kept a servant standing before him half an hour before the obstruction was overcome. It seemed to him, he said, 'as if another person had taken possession of his will.' '*

An author who must always be cited for the facts of morbid psychology, Thomas De Quincey, has described for us from his own experience this paralysis of the will. The observation is so much the more valuable that it is due to a subtle mind and a skilful writer.

Owing to a prolonged abuse of opium he was compelled to abandon studies that he had formerly followed with great interest. He shrank from them with a sense of powerlessness and infantine feebleness, with an anguish so much the greater from remembering the time when he had consecrated to them hours of delight. One unfinished work to which he had given the best of his intellect brought to him no longer aught but a "tomb of hopes defeated, of baffled efforts, of materials uselessly accumulated, of foundations laid that were never to support a superstructure." In "this state of volitional but not intellectual weakness," he applied himself to political economy, a study for which he had been once eminently qualified. After having discovered very many errors in the current doctrines, he found in the treatise of Ricardo a satisfaction for his intellectual thirst, and a pleasure and an activity which for a long time he had not known. Thinking that some important truths had, however, escaped the scrutinising eye of Ricardo, he conceived the project of a "Pro-

* Prof. J. H. Bennett (on the authority of Sir Robert Christison), *The Mesmeric Mania of 1851*, p. 16, cited by Carpenter, *Mental Physiology* (London 1874), p. 385.

legomena of Future Systems of Political Economy." Arrangements were made for printing and publishing the work, and it was twice announced. But he had to write a preface and a dedication to Ricardo, and he found himself entirely incapable of doing it; so the arrangements were countermanded and the work remained on his table.

"This state of intellectual torpor I experienced more or less throughout the four years during which I was under the Circean spells of opium. But for the mental suffering I might indeed be said to have existed in a dormant state. I seldom could prevail upon myself to write a letter: an answer of a few words to any that I received was the utmost that I could accomplish, and often this not until the letter had lain weeks, or even months, on my writing-table. Without the aid of M., all records of bills paid or to be paid must have perished, and my whole domestic economy—whatever became of political economy—must have gone into an irretrievable confusion. I shall not afterwards allude to this part of the case. It is one, however, which the opium-eater will find in the end as oppressing and tormenting as any other, from the sense of incapacity and feebleness, from the direct embarrassment incident to the neglect or procrastination of each day's appropriate duties, and from the remorse which must often exasperate the stings of these evils to a reflective and conscientious mind.

"The opium-eater loses none of his moral sensibilities or aspirations; he wishes and longs as earnestly as ever to realise what he believes possible and feels to be exacted by duty; but his intellectual apprehension of what is profitable, infinitely outruns his power not only of carrying out but even of attempting. He

lies under the weight of incubus and nightmare ; he lies in sight of all that he would fain perform, just as a man forcibly confined to his bed by the mortal languor of a relaxing disease who is compelled to witness injury or outrage offered to some object of his tenderest love : he curses the spells which chain him down from motion ; he would lay down his life if he might but get up and go out ; but he is powerless as an infant and cannot even attempt to rise." *

I will close with one final observation—a little long, the longest I know of, but one which will show the malady under all its aspects. It is reported by Billod in the *Annales médico-psychologiques*.

It is the case of a man sixty-five years old, "of a strong constitution, lymphatic temperament, a well-developed intellect, especially in all that concerns business matters, and a moderate degree of sensitiveness." Being very much attached to his profession of notary it was only after long hesitations that he determined upon selling his practice. Afterwards he fell into a state of profound melancholy, refusing nourishment, believing himself ruined, and pushing despair to the point of an attempt at suicide. I neglect, in what follows, only some details which are purely medical or without interest for us, and I permit the observer to speak.

"The faculty which appeared to us the most seriously impaired we do not hesitate to say was the will. . . . The patient frequently manifests an incapacity of willing to execute certain acts, although he has the desire to do so and his healthy judgment by a wise liberation makes him see their expediency and often even their necessity."

* *Confessions of an Opium Eater* (Boston, 1851), p. 106 et seq.

He was confined in the asylum at Ivry; it was decided that he should undertake with Mr. Billod a trip to Italy.

“When his approaching departure was announced to him, ‘I shall never be able to,’ he said, ‘though I find it dull here; will I then remain all my life at Ivry?’ The day before starting, he announced anew that he never could. On the day itself he arose at six in the morning to go and make this declaration to Mr. Mitivie. More or less resistance was therefore apprehended, but when I presented myself, he did not make the least opposition; only, as if he felt his will ready to escape him, he said: ‘Where is the cab? let me hurry and get into it.’

“It would be idle to take the reader with us, and make him a witness of all the phenomena presented by the patient during this trip. These phenomena may very well be resumed in three or four principal ones that I shall give as a criterion of all the others.

“The first presented itself at Marseilles. The patient, before setting out, had to execute a power of attorney to authorise his wife to sell a house. He draws it up himself, copies it upon headed paper and prepares to sign it, when there arises a difficulty upon which we were far from counting. After having written his name, it is utterly impossible for him to make the paraph. There is question, it is true, of a complicated paraph, but Mr. P. had always executed it with ease. Vainly did the patient struggle with this difficulty. A hundred times at least he makes with his hand above the sheet of paper the movement necessary to the act, which proves conclusively that the obstacle is not in the hand; a hundred times the restive will is unable to command the fingers to apply the

pen to the paper. Mr. P. does his utmost ; he stands up impatiently, stamps on the ground, then sits down again and makes new attempts : the pen is still unable to apply itself to the paper. Will any one deny here that Mr. P. had an earnest desire to finish his signature, and that he understood the importance of this act? Will any one deny the integrity of the organ charged with executing the paraph? It is evidently impossible to deny it. The agent appears as sound as the instrument ; but the first cannot bring itself to bear upon the second. The will—that power by which the hand should be set to performing the act conceived and judged necessary by the intellect—is evidently wanting. This struggle lasted three quarters of an hour ; the succession of efforts ended at last in a result of which I had despaired : the paraph was very imperfect, but it was executed. I was witness of this struggle ; I took the keenest interest in it, as the reader may well imagine, and I testify that it would be impossible to establish more clearly an incapacity of willing in spite of a desire to do so.*

“I observed some days afterwards an incapacity of the same kind. There was question of going out a little after dinner. Mr. P. had the keenest desire to do so ; he had wished, he said to me, to have an idea of the appearance of the city. For five days in succession, he took his hat, arose and prepared to set out ; but, vain hope, his will could not command his legs to put themselves in motion in order to take him into the street. . . . ‘Evidently I am my own prisoner,’ said the patient, ‘it is not you who prevent me from going out, it is not my legs that oppose it . . . what

*I transcribe this observation literally, without any reflexion upon the psychological doctrine of the author.

is it then?' Mr. P. complained thus of *not being able to will*, in spite of the wish that he had to do so. At last, after five days, making a final effort, he succeeded in going out, only to return five minutes afterwards perspiring and panting as if he had been running several kilometers, and very much astonished himself at what he had just done.

"Instances of this incapacity reappeared every moment. If the patient had the desire of witnessing a play, he could not will to go to it ; when at table among amiable companions he would have wished to take part in conversation, but the same powerlessness always followed him. It is true that this impotence often existed only, so to speak, in apprehension ; the patient feared that he would not be able, and yet succeeded even more than he expected ; but often, too, it must be said, his apprehension was justified."

After six days passed at Marseilles, the patient and the doctor set off for Naples ; "but it was not without extraordinary difficulty." During these six days "the patient formally expressed a refusal to embark, and a desire to return to Paris, being frightened in advance at the idea of finding himself with his diseased will in a foreign country, and declaring that it would be necessary to handcuff him in order to take him. On the day of departure he did not make up his mind to leave the hotel until he believed me determined to resort to a forcing apparatus ; and having gone out of the hotel he stopped in the street, where he would doubtless have remained if I had not sent for some seamen that an employé of the packet-boat office had the kindness to place at my disposition, who, however, needed only to show themselves. . . .

“Another circumstance tends to bring out still more the lesion of the will. We were at Rome, where we arrived the very day of the election of Pope Pius IX. My patient said to me, ‘This is a circumstance that I would call fortunate, if I were not sick. I should like to be able to witness the coronation; . . . but I do not know whether I can; I will try.’ The day having come, the patient rose at five o’clock in the morning, took out his black coat from his trunk, shaved himself, etc., and said to me: ‘You see, I am doing very much, I do not yet know whether I shall be able to go.’ At last, at the hour of the ceremony, he made a great effort and succeeded with much difficulty in going down. But ten days afterwards, at the feast of St. Peter, the same preparations and the same efforts led to no result. ‘You see well,’ the patient said to me, ‘that I am still my own prisoner. It is not the desire that is lacking to me, since I have been getting ready for three hours; here I am shaved, dressed, and gloved, and yet I am no longer able to leave this place.’

“In short, it was impossible for him to attend the ceremony. I had insisted very much, but I did not think that I ought to compel him.

“I will bring to an end this already rather extended observation by a single remark: it is, that the instinctive movements, the kind not subject, properly speaking, to the will, were not impeded in our patient like those which may be called directed. Thus, on arriving at Lyons, upon our return, our mail-coach running over a woman whom the horses had knocked down, my patient recovered all his energy, and, without waiting for the carriage to stop, threw off his cloak, opened the

door, and was the first to descend to the woman's side."

The author adds that the trip did not have the efficacy that he expected; that the patient felt better, however, in a carriage, especially when it was hard and the road bad; and that he finally returned to his family in just about the same condition as at first.*

The cases above cited represent a very definite group. There spring from them some very clear facts and some very probable inductions. Let us look, in the first place, at the facts.

1. The muscular system and the organs of movement are intact. From this side there is no impediment. The automatic activity, that which constitutes the ordinary routine of life, persists.

2. The intelligence is perfect; at least, nothing authorises one to say that it has suffered the least impairment. The end is clearly conceived, the means likewise, but the transition to act is impossible.

Here, then, we have a disease of the will in the most rigorous sense. We may remark in passing that disease makes for us a curious experiment. It creates exceptional conditions, which could not be produced in any other way: it divides the man, annihilates the individual reaction, leaves the rest intact; it produces for us, so far as that is possible, a being reduced to pure intelligence.

Whence comes this impotence of the will? Here the inductions begin. There are only two hypotheses possible regarding its immediate cause; it consists in

*Dr. E. Billod, "Maladies de la volonté," part ii, in *Annales médico-psychologiques*, vol. x, p. 172 et seq. The author cites several other cases of a much less clear character, which we shall not describe (see pp. 184, 319, et seq.)

an impairment either of the motor centres* or of the incitations that they receive.

Let us examine these two hypotheses, beginning with the second, which seems to me the more plausible.

Esquirol has preserved for us the remarkable answer that a patient made to him after he had been cured. "This lack of activity arose from the fact that my sensations were too weak to exert an influence upon my will." The same author has also noted the profound change that these patients experience in their general sense of life. "My existence," one of them writes to him, "is incomplete ; the functions and acts of ordinary life have remained to me, but in each of them there is something lacking, to wit, *the sensation which is proper to them and the joy which follows them*. . . . Each one of my senses, each part of myself, is, so to speak, separated from me, and can no longer procure for me any sensation." Would a psychologist better express to what degree the affective life is stricken, in that which is most general in it?

Billod reports the case of a young Italian woman "of brilliant education," who, having become insane through disappointment in love, was healed, but only to fall into a profound apathy regarding everything. "She reasons soundly upon all subjects, but she no longer has any will, in the proper sense of the word, neither power to will or to love, nor consciousness of what happens to her, of what she feels, or of what she does. . . . She says that she finds herself in the state of one who is neither dead nor alive, who lives in a

* We would remark that there is question of the condition, not of the motor organs, but of the *centres*, whatever opinion may be held regarding their nature and localisation.

perpetual sleep, to whom objects appear as though wrapped in a cloud, and to whom persons seem to move about like shadows, and words to come from a distant world."*

If, as we shall see at length later on, the voluntary act is composed of two very distinct elements: a state of consciousness totally impotent to cause or prevent action, and organic states which alone have this power; it must be admitted that the two events, ordinarily simultaneous because they are the effects of the same cause, are here disassociated. The inability to act is a fact. Is the intensity of the state of consciousness (which, in any case, is intermittent) also a fact? In that case it would be necessary to admit that the necessary and sufficient conditions occur, but for this event alone. Is it an illusion? I am inclined to think that it is. The ardent desire to act, that some of these patients believe themselves to experience, appears to me a simple illusion of their consciousness. The intensity of a desire is something entirely relative. In that state of general apathy, a given impulse that appears strong to them is in fact below the mean intensity; whence the inaction. In studying the state of the will in somnambulism, we shall see later on that certain subjects are persuaded that it depends wholly upon themselves to act, but that they are finally compelled by experience to admit that they are wrong and that their consciousness deceives them completely.†

On the contrary, when an excitation is very violent, sudden and unexpected, that is to say, unites all the conditions of intensity, it most frequently acts. We

* Billod, *Annales médico-psychologiques*, loc. cit., p. 184.

† See Chapter V, *infra*.

have seen, above, a patient recover his energy to save a woman who had been run over.*

Each one of us can, moreover, picture to himself this state of abulia; for there is no one who has not been through hours of dejection in which all incitements, exterior and interior, sensations and ideas, remain inoperant, leave us cold. It is a touch of abulia. There is only the difference between a less and a greater, between a transient condition and a chronic state.

If these patients cannot will, it is because all the projects they conceive awaken in them but feeble desires, insufficient to impel them to action. I express myself thus in order to conform to the current phraseology; for it is not the weakness of the desires, considered as simple psychic states, which induces the inaction. That would be to reason from appearances only. As we have shown above, every state of the nervous system, corresponding to a sensation or an idea, expresses itself so much the better in movement as it is accompanied by those other neural states, whatever they may be, which correspond to feelings. It is from the weakness of these states that abulia results, not from the weakness of the desires, which is only a sign.

The cause is then a relative insensibility, a general impairment of sensibility; what is attacked is the emotional life, the possibility of being moved. Whence does this morbid state itself come? The problem is chiefly of a physiological order. Beyond doubt there is in patients of this class a notable depression of the vital activities. It may reach such a point that all the faculties are affected and the individual becomes an

* I have learned from Dr. Billod that this patient recovered his activity in consequence of the events of June, 1848, and the emotions they caused him.

inert thing. This is the state that the physicians designate by the names of melancholia, lypemania, and stupor, whose physical symptoms are a slackening of the circulation, a lowering of the temperature of the body, and an almost complete immobility. These extreme cases go beyond our subject; but they reveal to us the ultimate causes of the impotences of the will. Every depression in the vital tone, slight or profound, fugitive or lasting, has its effect. The will so little resembles a faculty reigning as a mistress that it depends at each instant upon the most trivial and hidden causes; it is at their mercy. And yet, as it has its source in the biological processes that take place in the inmost depths of our tissues, we see how true it is to say that it is our very self.

We may venture another hypothesis and seek the explanation of abulia in the order of motor manifestations. Between the resolution which expresses itself by an "I will," and which is a purely mental act, and the execution of the movements willed, which is a purely physical act, there is an intermediate stage which is the awakening and excitation of the motor images. All our movements, executed at first at random, leave after them traces, residua, which constitute a motor memory, thanks to which, after a period of gropings and apprenticeship, the will, become mistress of its instrument, has only to speak to be obeyed. Might it not be supposed that these motor images are impaired or lost and that as a result the will remains suspended in a void and impotent to pass into action? As specious as this hypothesis may be, it is not tenable. It would be equivalent to saying that these diseases of the will are diseases of the memory; but abulia is not a kind of amnesia. The agaphic patient who,

through loss of the motor images, no longer knows how to write, totally differs from Billod's patient who, as soon as he succeeds in acting, writes like any one else.

It would be more permissible to associate abulia with the *psychic paralyses* studied by Reynolds, Charcot, and other authors. In cases of this kind, the patient is paralysed because he *believes* himself paralysed. The whole treatment consists in extirpating from his mind this debilitating image. As soon as he believes himself able to act he acts.* Yet, does this not bring us back indirectly to the first hypothesis? For how can the idea of a motor impotence act except through the state of depression which accompanies it, that is to say, through a diminishing of excitation.

The reader may choose between the two hypotheses which have been propounded ; our preferences are for the first one.†

II.

The second group resembles the first in its effects (enfeeblement of the will) and in its causes (depressive influences). The only difference is that the incitation to act is not extinct. The first group presents positive causes of inaction, the second group negative causes. The inhibition results from an antagonism.

In all of the observations which are to follow, the impairment of the will arises from a sentiment of fear, without a reasonable motive, which varies from simple

* These psychical paralyses can be produced by suggestions in the hypnotic state. One can paralyse the organs of speech, an arm, a leg, etc. An affirmation creates the infirmities, the contrary affirmation destroys them.

† For a very detailed study of a case of abulia (mania of doubt) see the articles by Mr. Pierre Janet, in the *Revue philosophique*, March and April, 1891. That author explains it by a "psychic disintegration."

anxiety to anguish and stupefying terror. The intellect appears intact in certain cases, impaired in others. So some of these cases are of a doubtful character, and it is difficult to say whether they denote a malady of the will alone.*

The following observation makes the transition from one group to the other ; to tell the truth it belongs to both.

A man thirty years of age finds himself mixed up in riots which cause him a great fright. Thereafter, although he has preserved his perfect lucidity of mind, although he administers his fortune very well and directs an important business, "he cannot remain alone, either in the street or in his room ; he is always accompanied. When he is away from home it would be impossible for him to return alone to his domicile. If he does go out alone, which very rarely occurs, he soon stops in the middle of the street, and would remain there indefinitely, without going either forwards or backwards, if some one did not bring him back. He appears to have a will, but it is that of the people who surround him. When one desires to overcome this resistance of the patient, he falls into a swoon."†

Several alienists have recently described under the names of fear of spaces, fear of places (*Platzangst*), and agoraphobia, a fantastic anxiety which paralyses the will, and against which the individual is powerless to react, or succeeds in doing so only by indirect means.

An observation by Westphal may serve as a type.

* It is well to remark once for all that, studying here only the disorders exclusively characteristic of the will, we have had to eliminate the cases where the psychic activity is affected in its totality, and those in which derangements of the will are only the effect and the manifestation of intellectual insanity.

† Billod, loc. cit., p. 191.

A robust traveller, perfectly healthy in mind and presenting no disturbance of motility, finds himself seized with a sense of anguish at the sight of a public place or of a space of any considerable extent. If he has to cross one of the great squares of Berlin, he has the feeling that the distance is one of several miles, and that he will never be able to reach the other side. This emotion diminishes or disappears if he goes around the square following the houses, or if he is accompanied, or even if he simply supports himself upon a cane.

Carpenter reports, after Bennett,* a "paralysis of the will," which seems to me of the same order. "When a certain man took a walk in the street and came to some break in the line of houses, he was unable to go on any further; his will became suddenly inactive. The encountering of a square never failed to stop him. To cross a street was also something very difficult, and when he passed the threshold of a door in entering or going out he was always arrested for some minutes."

Others, in the open country, feel at ease only when walking beside bushes or under the shelter of the trees. Examples might be multiplied, but without profit, as the fundamental fact remains the same.†

The medical discussions regarding this morbid state do not concern us here. The psychological fact reduces itself to a feeling of fear, like so many others that are met with, and it is indifferent that this feeling is puerile and chimerical as regards its causes; we

* Loc. cit., p. 385.

† For further details, see Westphal, *Archiv für Psychiatrie*, vol. iii (two articles); Cordes, *ibid.*; Legrand du Saulle, *Annales médico-psychologiques*, 1876, p. 405, with a discussion of this subject; Ritti, *Dictionnaire encyclopédique des sciences médicales*, article "Folie avec conscience"; Maudsley, *Pathology of Mind* (French translation, p. 339, seq.).

have only to note its effect, which is to hinder volition. But we must inquire whether this depressive influence merely arrests the volitional impulse, which remains intact in itself, or whether the power of individual reaction is also impaired. The second hypothesis imposes itself upon us, for the feeling of fear not being insurmountable (as these patients prove in certain cases) it must be admitted that the individual's power of reaction has fallen below the general level ; in such wise that the arrest results from two causes which act in the same direction.

Unfortunately the physiological conditions of this impairment are not known. Numerous conjectures have been made. Cordes, himself stricken with this infirmity, considers it "a functional paralysis, symptomatic of certain modifications of the motor centres, and capable of giving rise to certain impressions within us. Specifically, it would be an impression of fear which would give rise to a transient paralysis ; an effect almost null if the imagination alone comes into play, but carried to the highest degree by the adjunction of accessory circumstances." The primitive cause would be then "a paretic exhaustion of the motor nervous system, of that portion of the brain which presides not only over locomotion but also over muscular sensibility."

This explanation, if it were well established, would be of great importance to our subject. It would show that the impotence of the will depends upon an impotence of the motor centres, which would have the advantage of giving to our researches a secure physiological basis. But it would be premature to draw here conclusions which would be better placed at the end of our work.

I shall not speak at length regarding the mental state called doubting-insanity or fumbling-mania (*Grübel sucht*). It represents the pathological form of the irresolute character, just as abulia is that of the apathetic character. It is a state of constant hesitation from the most trivial motives, with inability to reach any definitive result.

The hesitation exists at first in the purely intellectual order. The patient asks himself endless questions. I borrow an example from Legrand du Saulle. "A very intelligent woman cannot go out in the street without asking herself: 'Is some one going to fall out of a window at my feet? Will it be a man or a woman? Will the person be wounded or killed? If wounded, will it be in the head or the legs? Will there be blood on the sidewalk? If the person is killed how shall I know it? Ought I to call for help, or to run away, or to recite a prayer? Shall I be accused of being the cause of this occurrence? Will my innocence be recognised?' and so on." These interrogations continue without end, and there exist a great number of analogous cases, recorded in special treatises.*

If there were nothing more than this "psychological rumination," as the author cited expresses it, we should have nothing to say regarding it; but this morbid perplexity of the intellect expresses itself in the actions. The patient no longer dares to do anything without endless precautions. If he writes a letter, he reads it over several times, for fear he may have forgotten a word or offended against orthography.

* Consult in particular: Legrand du Saulle, *La folie du doute avec délire du toucher*, 1875; Griesinger, *Archiv für Psychiatrie*, 1869; Berger, *ibid.*, 1876; Ritti, *Dictionnaire encyclopédique*, loc. cit.

If he is shutting up a piece of furniture he verifies several times over the success of his operation. In the same way for his apartment; there is a repeated verification of the fastenings, of the presence of the key in his pocket, of the state of his pocket, etc.

In a graver form, the patient, pursued by a puerile fear of dirtiness or unwholesome contact, no longer dares to touch pieces of money, door-knobs, window-fastenings, etc., and lives amid perpetual apprehensions. Such was the cathedral beadle mentioned by Morel, who, worried for twenty-five years by absurd fears, no longer dares to touch his halberd, reasons with himself, rails at himself, and triumphs over himself, but by a sacrifice that he is apprehensive of being unable to make the next time.*

This malady of the will results in part from weakness of character, in part from the intellectual state. It is quite natural that this flux of chimerical ideas should express itself in useless acts, not adapted to reality; but the impotence of the individual reaction plays an important rôle. So we find a lowering of the vital tone. The proof of this is to be found in the causes of this morbid state (hereditary neuropathies, debilitating maladies); in the crises and the syncope to which the effort to act may lead; and in the extreme forms of the disease where these miserable persons, consumed by hesitations without respite, no longer write, no longer listen, no longer speak, "but talk to themselves in a low voice, then in an undertone, and in some cases end by simply moving the lips, expressing their ideas by a sort of murmur (*musitation*).

Finally, let us note the cases in which the impair-

* *Archives générales de médecine*, 1866.

ment of the will borders on extinction. When a permanent and obtrusive state of consciousness is accompanied by a feeling of intense terror, there occurs an almost absolute inhibition, and the patient appears stupid without being so. Of this character is the case reported by Esquirol of a young man who appeared to be an idiot, who had to be dressed, put to bed, and fed, and who, after his recovery, acknowledged that an interior voice used to say to him: "Do not move, or you are dead." *

Guislain also reports a curious fact, but one in which the absence of psychological data leaves us in a quandary and permits only an equivocal interpretation. "A young lady, courted by a young man, was seized with a mental alienation, whose true cause was unknown and whose distinctive feature was a strong contrariness of disposition, which was soon transformed into a morbid mutism. During twelve years she made answer to questions only twice; the first time, under the influence of her father's imperative words; the second, on her entrance into our establishment. In both cases she was strangely, surprisingly laconic."

For two months Guislain devoted himself to repeated attempts to effect a cure. "My efforts were vain and my exhortations without effect. I persisted, and very soon I noticed a change in the features, a more intelligent expression in the eyes; a little later she would utter from time to time some sentences, clear, categorical explanations, interrupted by long intervals of silence; for the patient showed an extreme repugnance to yielding to my entreaties. . . . It could be seen that each time her self-love was gratified by the victory that she obtained over herself. In her an-

* Esquirol, vol. ii, p. 287.

swers there could never be observed the slightest insane idea ; her alienation was exclusively a malady of the impulsive will. Often a sort of bashfulness seemed to restrain this patient, whom I began to consider as decidedly convalescent. For two or three days she ceased to speak ; then, as a result of renewed sollicitations, speech returned to her again, until at last she took part, of her own accord, in the conversations going on around her. . . . This recovery is one of the most astonishing that I have seen in my life.”*

The author adds that the restoration was complete and lasting.

This state of morbid inertia, of which abulia is the type, where the “I will” is never followed by action, shows that volition, considered as a state of consciousness, and the efficient power of acting are two distinct things. Without insisting for the moment on this point, let us dwell upon this fact of *effort*, which is of prime importance in the psychology of the will, and which is lacking here.

The feeling of *muscular* effort has been studied by Mr. William James† in a manner so profound and so rigorous that there is no need of going over it again, and it is sufficient to recall briefly his conclusions. That physiologist has shown that the sense of the muscular energy expended in any act whatever is “a complex afferent sensation, which comes from the contracted muscles, the tense ligaments, the compressed articulations, the firm chest, the closed glottis, the contracted eye-brow, the set jaws, etc.” He has discussed, point by point, supporting himself on the results of experiment, the opinion which makes of it an effer-

* Guislain, op. cit., vol. ii, pp. 227, 228.

† *The Feeling of Effort*, Boston, 1880.

ent sensation, connected with the motor discharge and coinciding with the outgoing current of nervous energy. He has notably shown, after Ferrier and others, how, in cases of paralysis, if the sense of effort is preserved, although the paralysed member cannot be moved in the slightest degree, it is because the conditions of the consciousness of effort continue to exist, the patient moving the member or organ of the opposite side.

But Mr. James rightly distinguishes the muscular from the volitional effort, which latter, in many cases, implies no immediate movement or no more than an extremely feeble muscular energy. Such, to borrow from him one of his illustrations, is the case of the man, who, after a long hesitation, decides to put arsenic into his wife's glass in order to poison her. Every one knows moreover by his own experience this state of struggle in which the effort is all internal. Here we take issue with regret from that author, who locates this effort in a region apart and supersensible. To us it seems to differ from the other only in one point: its physiological conditions are little known, and only hypotheses can be ventured.

✧ There are two types of this volitional effort: one which consists in arresting the movements of instinct, or passion, or habit; the other, in overcoming languor, torpor, or timidity; the first is an effort with a negative result, the other, an effort with a positive result; one produces an inhibition, the other an impulsions. These two types can themselves be reduced to a single formula. There is effort when the volition follows the line of greatest resistance. This volitional effort never takes place when the impulse (or inhibition) and the choice coincide, when our natural tendencies and the "I will" go in the same direction; in clearer terms,

when what is immediately agreeable to the individual and what is chosen by him are but one. It always occurs when two groups of antagonistic tendencies are struggling each to supplant the other. In fact, as every one knows, this struggle takes place between the lower tendencies, whose adaptation is limited, and the higher tendencies, whose adaptation is complex. The first are always the stronger by nature ; the second are sometimes so by art. The first represent a power enregistered in the organism, the others an acquisition of recent date.

How, then, can these sometimes triumph? It is because the "I will" is a reinforcement for them. Not, of course, as a simple state of consciousness, but because, under this volition, which is an effect, there are causes, known, partly known, and unknown, which we have so often summed up in one word : the individual character. All these little active causes which constitute the physical and psychic individual are not abstractions. They are physiological or psycho-physiological processes : they presuppose work done in the nervous centres, whatever they may be. Is it rash to maintain that the sense of volitional effort is itself also an effect of these physiological processes? The only objection that can be made is our present inability to determine its mechanism. This point is all the more obscure because the mechanism must differ according as it is an impulse or an inhibition that is to be produced : so the feeling of volitional effort is not identical in the two cases.

The inward struggle is accompanied by a feeling of fatigue often intense. Although we do not know all about the nature and causes of this state, it is generally supposed that even in muscular effort the seat of the

fatigue is in the neural centres which direct the contraction, not in the muscles; that there is a nervous, not a muscular, exhaustion. In reflex contractions there is no fatigue perceived. In hysterical persons, contractions are seen to persist almost indefinitely, without the patient experiencing the least sense of lassitude; it is then the voluntary effort which wearies, and not the contraction of the muscle.*

We have, therefore, no reason except our ignorance for attributing to volitional effort a character apart. Are the neural elements capable of furnishing, in all the cases where this effort must go forth, an increase of work during a given period? or else are they, by nature or by lack of education and exercise, quickly exhausted and incapable of regaining new strength? Have they, or have they not, a sufficient quantity of disponible force stored up in them? The problem of action in the direction of the greatest resistance is there reduced to its lowest terms. It is this hidden, almost unknown labor which manifests itself in the feeling of volitional effort. The feeling of effort in all its forms is, accordingly, a subjective state corresponding to certain operations going on in the nerve-centres and other parts of the organism, but resembling them as little as the sensations of sound and of light resemble their objective cause. To produce a great moral or intellectual effort, it is necessary for the appropriate nerve-centres (whatever they may be, and our ignorance on this point is almost complete) to be in a state to perform intense and repeated work, instead of becoming exhausted at short notice and without recupera-

* Richet, *Physiologie des nerfs et des muscles*, pp. 477-490. Delbœuf, "Étude psychophysique," p. 92 et seq., in *Eléments de psychophysique*, vol. i.

tive power. The capacity for effort is, therefore, in the last analysis a natural gift.

To be less indefinite, let us take the commonplace example of a vicious man. If he has never in his life, either spontaneously or under the influence of others, experienced even the faintest desire for conversion (supposing that such a case occurs), it is because the moral elements, with the corresponding physiological conditions, are completely lacking in him. If, under any circumstances, the idea of amendment rises up in him, we may remark in the first place that this occurrence is involuntary; but it supposes the pre-existence and the calling into play of certain psycho-physiological elements. Should this end be chosen, affirmed as having ought to be, willed; if the resolution does not last it is because the individual is incapable of effort; it is because there is not in his organisation the possibility of repeated work of which we have spoken; if it does last, it is because it is maintained by virtue of effort, by that interior labor which produces the inhibition of contrary states. Every organ develops by exercise; it is the same here, in such wise that repetition becomes easier. But if a first element is not given by nature, and with it a potential energy, nothing results. The theological dogma of grace as a free gift appears to us, therefore, founded upon a much more exact psychology than the contrary opinion,* and we see how easily it may be made to undergo a physiological transformation. To return to the morbid cases with which we are dealing, there must be an incapacity for effort, temporary and accidental, but extending to almost the entire organism.

* The doctrine of grace is already met with among the Hindus, notably in the Bhagavad-Gitâ, xi, 53. See Barth, *The Religions of India*, 75, 219.

CHAPTER II.

IMPAIRMENTS OF THE WILL. II. EXCESS OF IMPULSE.

I.

WE HAVE just been looking at cases in which the intellectual adaptation, that is to say, the correspondence between the intelligent being and the environment, being normal, the impulse to action is absent, very weak, or at least insufficient. In physiological language, the cerebral acts which are the basis of the intellectual activity (the concept of an end and of means, choice, etc.) remain intact, but there is lacking to them those concomitant states which are the physiological equivalents of the feelings, and whose absence occasions the defect of action.

We are about to witness cases contrary to the preceding in certain respects. The intellectual adaptation is very weak, at least very unstable; rational motives are powerless to act or restrain from action; the impulses of an inferior order gain all that the higher impulses lose. The will, that is to say, the rational activity, disappears, and the individual falls back into the domain of instinct.

There are no examples which can better show us that the will, in the exact sense, is the crown, the last term of an evolution, the result of a great number of

tendencies disciplined in accordance with an hierarchic order; that it is the most perfect species of that genus which is called activity; in such wise that the study which is to follow might be entitled: How the will becomes impoverished and disappears.

Let us examine the facts. We will divide them into two groups: (1) those which, being hardly conscious (even if they are so at all), denote an absence rather than an enfeeblement of the will; (2) those which are accompanied by full consciousness, but in which, after a longer or shorter struggle, the will succumbs or only recovers itself by outside assistance.

* * *

I. In the first case "the impulse may be sudden, unconscious, followed by an immediate execution, without the understanding having even had time to take cognisance of it. . . . The act has then all the characteristics of a purely reflex phenomenon which takes place inevitably, without any connivance of the will. It is a true convulsion which differs from the ordinary convulsion only because it consists of movements associated and combined in view of a determined result. Such is the case of that woman who, seated on a bench in a garden, in an unaccustomed state of causeless sadness, gets up suddenly, throws herself into a ditch full of water as if to drown herself, and who, saved and restored to perfect lucidity, declares, a few days after, that she is not aware of having wished to commit suicide, nor has she any remembrance of the attempt that she has made." *

"I have seen," says Luys,† "a number of patients

* Foville, *Nouveau dictionnaire de médecine*, article "Folie," p. 342.

† This citation is given in the earlier French editions, though omitted in the later ones.—*Trans.*

who repeatedly attempted suicide in the presence of those who watched them, but they had no recollection of the fact in their lucid state. And what proves the unconsciousness of the mind under these conditions is the fact that the patients do not perceive the inefficacy of the methods they employ. Thus a lady who attempted suicide whenever she saw a table-knife, did not notice one day when I was watching her that I had substituted for the knife a harmless instrument. Another patient tried to hang himself with a half-rotten cord that was not strong enough to bear even slight tension." *

Among epileptics, impulses of this kind are so frequent that pages might be filled with them. Hysterical patients would also furnish innumerable examples; they have a frantic tendency to the immediate satisfaction of their caprices or of their wants.

Other impulses have effects less grave, but denote the same psychic state. "In certain patients, the sur-excitation of the motor forces is such that they walk for whole hours without stopping, without looking around them, like mechanical apparatus that have been set in motion." A marchioness of a very distinguished mind, says Billod, in the middle of a conversation "interrupts a sentence that she afterwards goes on with, in order to address to some one in the company an improper or obscene epithet. The utterance of this word is accompanied with blushing, with a confused and abashed air, and the word is spoken in an abrupt tone like an arrow leaving the string." An hysterical patient of long standing, very intelligent and very lucid, "experiences at certain moments the need of going into some solitary place to shout; she unburdens her griefs,

* *Maladies mentales*, pp. 373, 439, 440.

her complaints against her family and her environment. She knows perfectly well that she is wrong to divulge certain secrets aloud ; but, as she insists, she is compelled to speak and satisfy her grudges." *

This last case leads us to the irresistible impulses with consciousness. Confining ourselves to the others, that we could multiply to profusion, they show us the individual reduced to the lowest degree of activity, that of pure reflexes. The acts are unconscious (at any rate not deliberate), immediate, irresistible, with an adaptation invariable and of little complexity. From the point of view of physiology and of psychology, the human being under these conditions is comparable to an animal which has been decapitated or at least deprived of its cerebral lobes. It is generally admitted that the brain can dominate the reflexes for the following reason : the excitation, starting from one point in the body, divides its self on its arrival in the spinal cord and follows two paths ; it is transmitted to the reflex centre by a transverse route ; to the brain by a longitudinal and ascending one. The transverse route offering more resistance, transmission in this direction requires a rather long time (experiment of Rosenthal). The lengthwise transmission is, on the contrary, much more rapid. The suspensive action of the brain consequently has time to take place and to moderate the reflexes. In the foregoing cases, the brain being without action, the activity remains in its inferior degree, and, in default of its necessary and sufficient conditions, volition is not produced.

II. The facts of the second group deserve to be studied at greater length : they bring out the defect of the will or the artificial means which maintain it. Here

* Billod, *loc. cit.*, 193 seqq.

the patient has full consciousness of the situation ; he feels that he is no more master of himself, that he is dominated by an interior force, irresistibly impelled to commit acts that he reprobates. The intellect remains sufficiently healthy, the madness exists only in the acts.

The most simple form is that of *fixed ideas* with obsession. Such a one cannot deliver himself from the invincible necessity of counting, without end or repose, all that he sees and touches, all the words that he reads or hears, all the letters of a book, etc. (arithmomania). He is conscious of the absurdity of this labor, but he *must* count. Another is obsessed with an implacable need of knowing the name of all the unknown persons that he meets in the streets or while travelling (onomatomania of Charcot and Magnan). He tries in vain to escape from this puerile inquisitiveness ; he *must* know them.

These obsessions, and analogous ones that I omit, have at least one advantage. As they have their origin in intellectual states, pure ideas (not wants or feelings), their satisfaction is without danger.

All this, even in action, remains theoretical, speculative.

It is quite otherwise with the irresistible impulses of affective origin, springing from needs and instincts, of which we are about to speak.

There will be found in a book by Marc, now somewhat forgotten,* an ample collection of facts upon which later writers have often drawn. Let us cite a few of them.

A lady sometimes attacked with homicidal impulses used to ask to be restrained by means of a strait

**De la folie considérée dans ces rapports avec les questions médico-judiciaires* (2 vol. 8vo., Paris, 1840).

jacket, announcing afterwards the moment when all danger was past and when her liberty of movement could be restored.

A chemist tormented in the same way by homicidal desires caused his two thumbs to be tied together with a ribbon, and found in this simple obstacle the means of resisting the temptation.

A domestic of irreproachable conduct begged her mistress to let her go away, because when she saw naked the child of which she had charge, she was devoured with a desire to disembowel it.

Another woman, of great intellectual culture and full of affection for her parents, "began to strike them in spite of herself and asked some one to come to her aid by holding her in an arm-chair."

A melancholic patient tormented with the idea of suicide got up at night, went and knocked at his brother's door and cried to him : "Come quickly, suicide pursues me, very soon I shall no longer resist."*

Calmeil, in his "*Traité des maladies inflammatoires du cerveau*," reports the following case, of which he was a witness and which I will report at full length because it will dispense me from many others :

"Glénadel, having lost his father in infancy, was raised by his mother who adored him. At sixteen years his character, until then good and submissive, changed. He became sombre and taciturn. Pressed with questions by his mother, he at last decided upon an avowal : 'I owe everything to you,' he said to her, 'I love you with all my soul ; however, for some days an incessant idea has impelled me to kill you. Do not let it happen, that, I being at last vanquished, so great a misfortune shall take place ; let me enlist.' In spite

* Guislain, *op. cit.*, i, 479.

of pressing solicitations, he was immovable in his resolution, went away and was a good soldier. However, a secret will continually urged him to desert, so as to return to the country and kill his mother. At the end of his engagement, the idea was as strong as on the first day. He contracted a new engagement. The homicidal instinct persisted, but accepted the substitution of another victim. He thinks no more of killing his mother, the frightful impulse points out to him day and night his sister-in-law. To resist this second impulse, he condemns himself to a perpetual exile.

“Meanwhile a compatriot arrives at his regiment. Glénadel confides to him his trouble. ‘Reassure yourself,’ the other says to him, ‘the crime is impossible, your sister-in-law has just died.’ At these words, Glénadel rises up like a delivered captive; he is filled with joy; he sets out for his country, which he had not seen since his childhood. On arriving, he perceives his sister-in-law alive. He cries out, and the terrible impulse instantly seizes him again like a prey.

“That evening he made his brother tie him. ‘Take a stout rope, tie me like a wolf in the barn, and go and notify Mr. Calmeil. . . .’ He obtained from him his admission into an asylum for the insane. The day before his entrance he wrote to the director of the establishment: ‘Sir, I am going to enter your house. I shall conduct myself there as at the regiment. They will think me healed; perhaps at some moments I may pretend to be so. Do not ever believe me; I must not go out any more under any pretext. When I beg for my release, be more watchful than ever; I would use that liberty to commit a crime which horrifies me.’”

It must not be believed that this example is unique

or even rare, and in the alienists we find several cases of individuals who, tormented by a necessity of killing persons who are dear to them, fly to an asylum to make themselves prisoners.

The irresistible and yet conscious impulses to steal, to commit arson, to destroy oneself by alcoholic excesses, enter into the same category.* Maudsley in his "Pathology of Mind,"† has collected so full a range of examples that the best thing to do is to refer the reader to it.

All those fatal tendencies classed under the names of dipsomania, kleptomania, pyromania, erotomania, homicidal and suicidal monomania are to-day no longer considered as distinct morbid forms, but as different manifestations of one single and the same cause: degeneracy, that is to say, psychological instability and lack of co-ordination. Nothing is more frequent than the metamorphosis of one impulse into another, of homicide into suicide or inversely. In a very fine case reported by Morel,‡ we see a degenerated person who is driven in turn to suicide, homicide, sexual excesses, alcoholism and incendiary attempts. It would be curious for the psychologist to know why the unique cause manifests itself in effects so diverse, here in one manner and there in another; why the epileptic is more apt to be a thief, the imbecile an incendiary, etc. It seems that the ultimate reason for these diversities is found in the idiosyncrasy of the degenerate person, in his mental and physical constitution.§ The solution

* See Trélat, *Folie lucide*; Maudsley, *Crime and Insanity* (French translation, p. 186).

† French translation, chap. vii, p. 330 et seqq.

‡ *Maladies mentales*, p. 420.

§ Upon this point see Schüle, *Maladies mentales*, (translated from the German), vol. ii, p. 423.

of this problem does not concern us here. It is sufficient to note that all these creatures of impulse have the same characteristics: they are conscious, incoordinated, incapable of struggle.

II.

It must be remarked in the first place that there is an almost insensible transition between the healthy state and these pathological forms. The most reasonable people have foolish impulses cross their brain; but these sudden and unusual states of consciousness remain without effect, do not pass into action, because they are destroyed by contrary forces, the general habit of the mind; because, between this isolated state and its antagonists the disproportion is so great that there is not even a struggle.

In other cases, to which very little importance is ordinarily attached, there are acts which are fantastic, "but which have nothing in themselves reprehensible or dangerous; they may constitute a sort of a whim, a *crochet*, a *mania*, using this last word in its usual and vulgar sense.

"At other times, without yet being very compromising, the acts are already more serious: they consist in destroying, in striking without a motive an inanimate object, in tearing up clothes. —We have just now under observation a young woman who ruins all her dresses. The instance is cited of an amateur who, finding himself in a museum in front of a valuable picture, feels an instinctive impulse to break in the canvas. Very often these impulses pass unperceived and are confided only to the consciousness which experiences them." *

* Foville, *op. cit.*, p. 341.

Certain fixed ideas of a useless or unreasonable nature impose themselves upon the mind, which judges them absurd, but is powerless to prevent them from expressing themselves in acts. There will be found in a work by Westphal some curious facts of this kind. One man, for example, is pursued by this idea, that he might have confided to a paper the statement that he is the author of some crime or other, and have lost that paper; consequently he preserves carefully all the pieces of paper that he runs across, picks up scraps of it in the street, assures himself that they contain no writing, takes them to his house and makes a collection of them. He has, moreover, full consciousness of the puerility of this idea, which torments him all the time; he does not believe in it, but yet is unable to rid himself of it.*

Between the most silly acts and the most dangerous ones, there is only a quantitative difference: what the first give on a small scale the others show enlarged. Let us try to understand the mechanism of this disorganisation of the will.

In the normal state an end is chosen, affirmed, carried out; that is to say that all or most of the elements of the ego concur in it. The states of consciousness (feelings, ideas, with their motor tendencies), the movements of our members form a consensus which converges towards the end, with more or less effort, by a complex mechanism, composed at once of impulses and of inhibitions.

* Westphal, *Ueber Zwangsvorstellungen* (Berlin, 1877). It may be remarked that, in certain cases, the fear of performing an act irresistibly leads to it; for instance, the effects of vertigo, people who throw themselves down in the street for fear of falling in it, who hurt themselves from fear of hurting themselves, etc. All these facts have their explanation in the nature of the mental representation, which, by very reason of its intensity, passes into action.

Such is the will in its complete and typical form ; but this is not a natural product. It is the result of art, of education, of experience. It is an edifice constructed slowly, piece by piece. Observation, both objective and subjective, shows that every form of voluntary activity is the fruit of a conquest. Nature furnishes only the materials ; a few simple movements in the physiological order, a few simple associations in the psychological order. By the aid of these simple and almost invariable adaptations there must be formed adaptations more and more complex and variable. For example, the child has to acquire his power over his legs, his arms, and all the movable parts of his body by means of gropings and trials, in which the appropriate movements are combined and the useless ones suppressed. The simple groups thus formed are combined into complex groups, those into still more complex ones, and so on. In the psychological order an analogous operation is necessary. Nothing complex is acquired at the onset.

But it is very clear that, in an edifice thus constructed little by little, the primitive materials alone are stable, and that in measure as the complexity is augmented the stability decreases. The most simple actions are the most stable : for anatomical reasons, because they are congenital, inscribed in the organism ; for physiological, because they are perpetually repeated in the experience of the individual, and, if one wishes to bring in heredity, which opens up an unlimited field, in the numberless experiences of the existing species and of those from which it has sprung.*

* Voluntary power coming into existence when certain groups of movements are obedient to certain states of consciousness, there may be cited by way of a pathological case the fact reported by Meschede (*Correspondenz-Blatt*. 1874, ii) of a man who "found himself in this singular condition that,

Taking all together, what is surprising is that the will, the activity of a complex and superior order, is able to become dominant. The causes which elevate it to this rank and maintain it there are the same which in man elevate and maintain the intellect above sensations and instincts: and, taking humanity as a whole, the facts prove that the domination of the one is as precarious as that of the other. The great development of the cerebral mass in civilised man, the influence of education and of the habits that it imposes, explain how, in spite of so many contrary chances, the rational activity often remains mistress.

The preceding pathological facts show well that the will is not an entity reigning by right of birth, although sometimes disobeyed, but a resultant always unstable, always ready to decompose itself, and, to say truly, a happy accident. These facts, and they are innumerable, represent a state which can be called equally a dislocation of the will and a retrograde form of activity.

If we consider the cases of irresistible impulses with full consciousness, we see that that hierarchic subordination of tendencies which is the will is divided into two parts: for the consensus which alone constitutes it there is substituted a struggle between two groups of contrary and almost equal tendencies, in such sort that one might say that it is dislocated.*

when he wished to do a thing, of his own accord or at another's orders, he, or rather his muscles, did just the contrary. When he wished to look to the right, his eyes turned to the left, and this anomaly extended to all his other movements. It was a simple contrariety of movement without any mental derangement and which differed from involuntary movements in this: that he never produced a movement except when he wished to, but that this movement was always the contrary of what he wished."

* It might be shown, if this were the place for it, how fragile and untrustworthy is the unity of the ego. In this case of struggle, which is the true ego, that which acts or that which resists? If there be no choice, there must be

If we consider the will no longer as a constituted whole, but as the culminating point of an evolution, we shall say that the inferior forms of activity are carrying it away, and that the human activity is retrograding. Let us remark moreover that the term inferior implies no moral preoccupation. It is an inferiority of nature, because it is evident that an activity which expends itself entirely in satisfying a fixed idea or a blind impulse is by nature limited, adapted only to the present and to a very small number of circumstances, while the rational activity goes beyond the present and is adapted to a great number of circumstances.

It must indeed be admitted, although the language does not lend itself to it, that the will like the intellect has its idiots and its geniuses, with all the possible degrees from one extreme to the other. From this point of view, the cases cited in the first group (impulses without consciousness) would represent the idiocy of the will or more exactly its madness; and the facts of the second group, certain cases of volitional weakness, analogous to intellectual debilities.

In order to pursue our study it is necessary to pass from the analysis of the facts to the determination of their cause. Is it possible to say upon what conditions this impairment of the higher activity is dependent? In the first place, one should ask oneself if its decline is an effect of the predominance of the reflexes, or if, on the contrary, it is their cause; in other terms, whether the impairment of the will is the primary or the second-

two of them. If a choice be made, it must be admitted that the preferred group represents the ego by the same title that in politics a small majority obtained with great difficulty represents the State. But these questions cannot be treated in passing; I hope some day to make them the subject of a monograph.

ary fact. This question does not admit of a general answer. Observation shows that both cases are to be met with; and consequently one can only give a special answer for a special case whose circumstances are well known.

It is indubitable that often the irresistible impulse is the *origo mali*; it constitutes a permanent pathological state. There takes place then in the psychological order, a phenomenon analogous to the hypertrophy of an organ or to the exaggerated proliferation of a tissue in one part of the body, that, for example, which leads to the formation of certain cancers. In the two cases, physical and psychical, this local disorder affects the whole organism.

The cases in which the voluntary activity is attacked directly, not by a rebound, are for us the more interesting. What takes place then? Is it the power of co-ordination which is attacked, or the power of inhibition, or both? This is an obscure point upon which only conjectures can be offered.

For the sake of seeking some light, let us interrogate two new groups of facts: artificial and momentary impairments produced by intoxication; and chronic impairments produced by cerebral lesion.

Everybody knows that the drunkenness caused by alcoholic liquors, hasheesh, or opium, after a first period of superexcitation brings about a notable weakening of the will. The individual has more or less consciousness of it; others observe it still better. Very soon (especially under the influence of alcohol), the impulses are exaggerated; the extravagances, violences, or crimes committed in this state are without number. The mechanism of the invasion of drunkenness is the

subject of much dispute. It is generally admitted that it commences in the brain, then acts on the spinal cord and the medulla, and in the last place on the great sympathetic. There is produced an intellectual obtusion, that is to say, the states of consciousness are vague, imperfectly distinguished, and of little intensity; the physio-psychological activity of the brain has diminished. This enfeeblement extends also to the motor power. Obersteiner has shown by experiments that, under the influence of alcohol, there is a less speedy reaction, although there is an illusion to the contrary.* That which is affected is not only the ideation but the ideo-motor activity. At the same time the power of co-ordination becomes null or ephemeral and without energy. The co-ordination consisting at the same time in making certain impulses converge towards a single end and in arresting useless or antagonistic impulses, it must be concluded from the fact that the reflexes are exaggerated or violent, that the inhibitive power, whatever be its nature and mechanism, is injured, and that its rôle in the constitution and maintenance of the voluntary activity is of the first importance.

Cerebral pathology furnishes other confirmatory facts, more striking, because they show in the individual a sudden and persistent change.

Ferrier and other authors cite cases where the lesion of the frontal convolutions (particularly the first and the second) brings about an almost total loss of will, and reduces the being to automatism, or at least to that state in which the reflex instinctive activity

**Brain*, Jan., 1879. A considerable number of experiments bearing on this point have been made, with concordant results: Exner in *Pflüger's Archiv*, 1873; Dietl and Vintschgau, *ibid.*, 1877; and some important work of Kräpelin's, done in Wundt's psycho-physical laboratory and published in the *Philosophische Studien*, p. 573 seqq.

reigns almost alone, without the possibility of inhibition.

A child is wounded by a knife in the frontal lobe. Seventeen years afterward he is found to be in good physical health, "but the injured man is incapable of occupations necessitating mental labor. He is irritable, especially when he has been drinking or undergone some abnormal excitation."

A patient of Lépine's, stricken with an abscess in the right frontal lobe, "was in a state of stupefaction. He seemed to understand what was said to him, but it was only with difficulty that he could be made to pronounce a word. He sat down when told to do so ; if he was lifted up he could make some steps without assistance."

A man who had received a violent blow which destroyed the greater part of the first and second frontal lobes "had lost his will. He understood, did as he was directed, but in an automatic and mechanical manner."

Several cases analogous to the preceding have been reported, but the most important for us is that of the "American quarryman." An iron bar thrown by a blast went through his skull, injuring only the prefrontal region. He was healed and lived for twelve years and a half after the accident ; but here is what is reported of the mental state of the patient after his healing. "His employers, who before his accident had considered him as one of their best and most skilful foremen, found him so changed that they could not confide to him again his old post. The equilibrium, the balance between his intellectual faculties and his instinctive inclinations, seemed destroyed. He is nervous, disrespectful, often swears in the coarsest man-

ner; which was not one of his habits previously. He is hardly polite to his equals; he bears contradiction impatiently, and does not listen to advice when it is in opposition to his own ideas. At certain moments he is excessively obstinate, although he is in general capricious and undecided. He makes plans for the future that he abandons immediately for others. He is a child in intelligence and intellectual manifestations, a man in his passions and instincts. Before his accident, although he had not received any schooling, he had a well-balanced mind and was regarded as a skilful, penetrating man, very energetic and tenacious in the execution of his plans. In this respect he is so changed that his friends say that they no longer recognise him."*

This case is very clear. In it the will is seen to be impaired in measure as the lower activity is augmented. It is another experiment, since it involves a sudden change produced by an accident under well-determined circumstances.

It is to be regretted that we have not many observations of this kind, for a great step would be made in our interpretation of the diseases of the will. Unfortunately the labors pursued with so much ardor on cerebral localisations have principally been directed to the motor and sensory regions, which, as is well known, leave out the greater part of the frontal region. There would be necessary also a critical examination of the contrary facts, of the cases where no impairment of the

*For these and other facts see Ferrier, *De la localisation des maladies cérébrales*, translated by Varigny, pp. 43-56; and C. De Boyer, *Etudes cliniques sur les lésions corticales des hémisphères cérébraux* (1879), pp. 48, 55, 56, 71. In half of the cases (twenty-three in all) of tumors, wounds, and abscesses of the frontal lobes, Allen Starr has noticed as the only symptoms: change of character, incapacity for self-control, and loss of the faculty of attention. *Brain*, No. 32, p. 570.

will appears to have been produced. This work done, Ferrier's thesis—that in the frontal lobes there exist centres of inhibition for intellectual operations—would gain more consistency and would furnish a solid basis for the determination of causes. As it is, it would be impossible to go beyond the domain of conjectures.

In comparing irresistible impulses with abulia it will be noted that the will fails as a result of entirely contrary conditions. In one case the intellect is intact and impulse is lacking; in the other, the power of co-ordination and inhibition being absent, the impulse expends itself entirely to the profit of automatism.

CHAPTER III.

IMPAIRMENTS OF VOLUNTARY ATTENTION.

WE are now about to study impairments of the will of a less striking character, those of voluntary attention. They do not differ in nature from those of the last group, consisting like them in a weakening of the power of direction and adaptation. It is a diminution of the will in the strictest, the narrowest, the most limited sense, indisputable even by those who confine themselves obstinately to subjective observation.

Before occupying ourselves with acquired weakness, let us examine the *congenital* weakness of the voluntary attention. Let us leave aside the narrow or mediocre minds in whom the feelings, the intellect, and the will are at the same level of weakness. It is more curious to take a great mind, a man endowed with a high intelligence, with a keen delicacy of feeling, but in whom the directive power is lacking, in such wise that the contrast between thought and will is complete. We have an example of this in Coleridge.

“There was probably no man of his time, or perhaps of any time,” says Carpenter,* “who surpassed Coleridge in the combination of the reasoning powers of the philosopher with the imagination of the poet

* *Mental Physiology*, pp. 266-'9.

and the inspiration of the seer ; and there was perhaps not one of the last generation who has left so strong an impress of himself in the subsequent course of thought of reflective minds engaged in the highest subjects of human contemplation. And yet there was probably never a man endowed with such remarkable gifts who accomplished so little that was worthy of them, the great defect of his character being the want of will to turn his gifts to account ; so that, with numerous gigantic projects constantly floating in his mind, he never brought himself even seriously to attempt to execute any one of them. It used to be said of him, that whenever either natural obligation or voluntary undertaking made it his *duty* to do anything, the fact seemed a sufficient reason for his *not* doing it. Thus, at the very outset of his career, when he had found a bookseller (Mr. Cottle) generous enough to promise him thirty guineas for poems which he recited to him, and might have received the whole sum immediately on delivering the manuscript, he went on, week after week, begging and borrowing for his daily needs in the most humiliating manner, until he had drawn from his patron the whole of the promised purchase-money, without supplying him with a line of that poetry which he had only to *write down* to free himself from obligation.

“The habit of recourse to nervine stimulants (alcohol and opium) which he early formed, and from which he never seemed able to free himself, doubtless still further weakened his power of volitional self-control ; so that it became necessary for his welfare that he should yield himself to the control of others. . . .

“The composition of the poetical fragment ‘Kubla Khan’ *in his sleep*, as told in his ‘Biographia Literaria,’ is a typical example of automatic mental action.

He fell asleep whilst reading the passage in 'Purchas's Pilgrimage' in which the 'stately pleasure house' is mentioned ; and, on awaking, he felt as if he had composed from two to three hundred lines, which he had nothing to do but to write down, 'the images rising up as things, with a parallel production of the correspondent expressions, without any sensation or consciousness of effort.' The whole of this singular fragment, as it stands, consisting of fifty-four lines, was written as fast as his pen could trace the words ; but having been interrupted by a person on business, who stayed with him above an hour, he found, to his surprise and mortification, that, 'though he still retained some vague and dim recollection of the general purport of the vision, yet, with the exception of some eight or ten scattered lines and images, all the rest had passed away, like the images on the surface of a stream into which a stone had been cast ; but, alas ! without the after-restoration of the latter.' "

The accounts of his contemporaries regarding his indefatigable conversation, his habit of dreaming aloud, and his perfect forgetfulness of his hearers, leave the impression of an exuberant intelligence, delivered to an unbridled automatism. Curious or amusing anecdotes on this point abound. I will not give any of them ; I prefer to leave to a master the care of depicting the man.

Coleridge's "whole figure and air, good and amiable otherwise, might be called flabby and irresolute ; expressive of weakness under possibility of strength. He hung loosely on his limbs, with knees bent, and stooping attitude ; in walking he rather shuffled than decisively stepped ; and a lady once remarked, he never

could fix which side of the garden-walk would suit him best, but continually shifted, in corkscrew fashion, and kept trying both. . . .

“Nothing could be more copious than his talk; and furthermore it was always, virtually or literally, of the nature of a monologue; suffering no interruption, however reverent; hastily putting aside all foreign additions, annotations, or most ingenuous desires for elucidation, as well-meant superfluities which would never do. Besides, it was talk not flowing anywhither like a river, but spreading everywhither in inextricable currents and regurgitations like a lake or sea; terribly deficient in definite goal or aim, nay often in logical intelligibility; *what* you were to believe or do, on any earthly or heavenly thing, obstinately refusing to appear from it. So that, most times, you felt logically lost, swamped near to drowning in this tide of ingenious vocables, spreading out boundless as if to submerge the world. . . .

“He began anywhere: you put some question to him, made some suggestive observation: instead of answering this, or decidedly setting out towards answer of it, he would accumulate formidable apparatus, logical swim-bladders, transcendental life-preservers and other precautionary and vehiculatary gear, for setting out; perhaps did at last get under way,—but was swiftly solicited, turned aside by the glance of some radiant new game on this hand or that, into new courses; and ever into new; and before long into all the universe, where it was uncertain what game you would catch, or whether any. His talk, alas, was distinguished, like himself, by irresolution: it disliked to be troubled with conditions, abstinences, definite fulfil-

ments ;—loved to wander at its own sweet will and make its auditor and his claims and humble wishes a mere passive bucket for itself ! . . .

“Glorious islets, too, balmy, sunny islets of the blest and the intelligible, I have seen rise out of the haze, but they were few and soon swallowed in the general element again. . . .

“Eloquent, artistically expressive words you always had ; piercing radiances of a most subtle insight came at intervals ; tones of noble pious sympathy, recognisable as pious though strangely colored, were never wanting long : but in general you could not call this aimless, cloud-capt, cloud-based, lawlessly meandering human discourse of reason by the name of ‘excellent talk,’ but only of ‘surprising’ ; and were reminded bitterly of Hazlitt’s account of it : ‘Excellent talker, very,—if you let him start from no premises and come to no conclusion.’” *

Let us descend now to commonplace examples of *acquired* impairment of the voluntary attention. It presents itself under two forms :

1) The first is characterised by excessive intellectual activity, a superabundance of states of consciousness, an abnormal production of feelings and ideas in a given time. We have already mentioned it in connexion with alcoholic drunkenness. This cerebral exuberance is most pronounced in the more intelligent intoxication of hasheesh and opium. The individual feels himself carried away by the uncontrollable flood of his ideas, and language is not rapid enough to express the rapidity of thought ; but at the same time the power of directing the ideas becomes weaker and

* Carlyle, *The Life of John Sterling*, (London, 1870) part i, chap. viii, pp. 65-68.

weaker, and the lucid moments shorter and shorter.* This state of psychic exuberance, whatever be its cause, whether fever, cerebral anæmia, or emotion, always has the same result.

Between this state and attention there is, then, a complete antagonism ; one excludes the other. It is, furthermore, no more than a particular case of the exaggeration of reflexes ; only there is question here of psychic reflexes. In other terms every present state of consciousness tends to expend itself, and it can do so only in two ways : either in producing a movement, an act, or else in awakening other states of consciousness, according to the laws of association. This last case is a reflex of a more complex kind, a psychical reflex, but it is like the other only a form of automatism.

2) The second form brings us back to the abulia type: it consists in a progressive diminution of the directive power and an eventual impossibility of intellectual effort.

“In the incipient stage of disease of the brain the patient complains of an incapacity to control and direct the faculty of attention. He finds he cannot, without an obvious and painful effort, accomplish his usual mental work, read or master the contents of a letter, newspaper, or even a page or two of a favorite book. The ideas become restive, and the mind lapses into a flighty condition, exhibiting no capacity for continuity of thought.

“Fully recognising his impaired and failing energies, the patient repeatedly tries to conquer the defect, and, seizing hold of a book, is resolved not to succumb to his sensations of intellectual incapacity,

* Moreau, *Du hachich et de l'aliénation mentale*, p. 60. Richet, *Les poisons de l'intelligence*, p. 71.

psychical languor, and cerebral weakness ; but he often discovers that he has lost all power of healthy mental steadiness, normal concentration, or co-ordination of thought. In his attempt to comprehend the meaning of the immediate subject under consideration he reads and re-reads with a determined resolution and apparently unflagging energy, certain striking passages and pages of a particular book, but without being able to grasp the simplest chain of thought, or follow successfully an elementary process of reasoning ; neither is he in a condition of mind fitting him to comprehend or retain for many consecutive seconds the outline of an interesting story ; understand a simple calculation of figures or narrative of facts. The attempt, particularly if it be a sustained one, to master and converge the attention to the subject which he is trying to seize, very frequently increases the pre-existing confusion of mind, producing eventually physical sensation of brain lassitude and headache."*

Many general paralytics, after having passed through the period of intellectual superactivity, that of gigantic projects, of immoderate purchases, of journeys without a motive, and of incessant loquacity, when the will is dominated by the reflexes, arrive at last at the period when it is impotent from atony ; effort lasts only a moment, until this ever increasing passivity ends in madness.†

* Forbes Winslow, *On Some Obscure Diseases of the Brain and Mind*, chap. xii (French translation, p. 216).

† Among this class of patients, some rare cases pass through a period of struggle which shows well in what measure the will is mistress and how it ends by succumbing. "I have seen at Bicêtre," says Billod (loc. cit.), "a general paralytic whose mania of greatness was as pronounced as possible, escape and go bare-footed during a beating rain and by night from Bicêtre to Batignolles. The patient remained in the world a whole year, during which he struggled with all his will against his intellectual mania, realising perfectly

The reader can see, without commentaries, that the diseases of voluntary attention are reducible to the types already studied. So it will be more fruitful, without multiplying examples, to endeavor to ascertain what light that state of mind called attention can throw upon the nature of the will, and what suggestions it can contribute towards the conclusions of the present work.

I do not need to make a study of attention, however interesting and little known this subject may be. The question can be dealt with here only indirectly, that is to say only so far as it touches on the will. I will reduce my conclusions on this point to the following propositions :

1) Voluntary attention, that whose wonders are usually recounted, is only an artificial, unstable and precarious imitation of spontaneous attention.

2) The latter alone is natural and efficacious.

3) It depends, in its origin and its continuance, on certain affective states, on the presence of agreeable or disagreeable *feelings* ; in a word, it is sensitive in its origin, which assimilates it to the reflexes.

4) Inhibitive acts appear to play an important but ill-comprehended part in the mechanism of attention.

To justify these propositions, it is well to examine in the first place spontaneous attention, taking it under its most diverse forms. The crouching animal watching for its prey, the child gazing with eagerness at some commonplace spectacle, the assassin waiting for his victim at the corner of a wood (here the image replaces the perception of the real object), the poet pos-

that at the first false idea they would take him back to Bicêtre. He returned there, nevertheless.—I have met several other examples of this persistence of the integrity of the will for a considerable time in general paralytics."

sessed by an interior vision, the mathematician seeking the solution of a problem :* all present essentially the same external and internal characters.

I would readily define the intense and spontaneous state of attention, with Sergi, as a differentiation of perception producing a greater psychic energy in certain nervous centres with a sort of temporary catalepsy of other centres.† But it is not the attention in itself that I have to study ; what concerns us is to determine its origin, its cause.

It is clear that in the states above enumerated and analogous ones, the true cause is an affective state, a feeling of pleasure, of love, of hatred, of curiosity ; in short a more or less complex state, agreeable, disagreeable, or mixed. It is because the prey, the spectacle, the idea of the victim, the problem to be resolved produce in the animal, the child, the assassin, the mathematician an intense and sufficiently durable emotion that they are attentive. Take away the emotion, all disappears. So long as it lasts, attention lasts. Everything takes place here, then, in the manner of those

* There is question here, it need not be said, only of those who are poets or mathematicians by nature, not by education.

† "The complicated process of attention is determined by the same anatomico-physiological conditions of the encephalic organs which are met with in a simpler form in sensitive excitation. These conditions depend upon the continued process of differentiation that the nervous elements undergo. We have already seen a first process of differentiation in the transition from the diffused [nervous] wave to the restricted wave, that is to say in the transition from sensation to distinct perception ; which implies a cerebral localisation. It is a process of still greater differentiation that we call attention. The excitatory wave becomes more restricted and more intense, more localised and more direct ; whereupon the entire phenomenon takes a clear and distinct form." (Sergi, *Teoria fisiologica della percezione*, chap. xii, p. 216. Besides this substantial chapter, the following works may be consulted on the attention studied from the point of view of the new psychology: Lewes, *Problems of Life and Mind*, third series, p. 184 ; Maudsley, *Physiology of Mind* (French translation, p. 457) ; Wundt, *Grundzüge der physiologischen Psychologie*, second edition, p. 391 ; Ferrier, *The Functions of the Brain*, § 102.)

reflexes which appear continuous because an excitation unceasingly repeated and always the same maintains them up to the moment when nervous exhaustion takes place.

Is a confirmation of this desired? Let it be observed that children, women, and light minds in general are capable of attention only during a very short time, because things awaken in them only superficial and unstable feelings; that they are completely inattentive to high, complex, and profound questions, because they leave them cold; that they are on the contrary attentive to insignificant things because they interest them. I might recall moreover, that the orator and the writer hold the attention of their public by appealing to their feelings (satisfaction, terror, etc.). The question can be looked at from every side and the same conclusion forces itself upon us. I would not insist upon so evident a fact if the authors who have studied the attention did not appear to me to have forgotten this most important influence.

On this account it should be said that spontaneous attention gives a maximum of result with a minimum of effort, while voluntary attention gives a minimum of result with a maximum of effort; and that this opposition is so much the more marked as the one is more spontaneous and the other more voluntary. In its highest degree, voluntary attention is an artificial state in which, by the aid of assumed feelings, we maintain with great difficulty certain states of consciousness which tend only to disappear (for example, when we follow, for politeness sake, a very tiresome conversation). In one case what determines this specialisation of consciousness is our whole individuality; in the sec-

ond it is an extremely weak and limited portion of our individuality.

Many questions would arise here ; but, I repeat, I do not need to study attention in itself. I simply had to show (regarding which I hope there remains no doubt) that it is in its origin of the same nature as the reflexes ; that in its spontaneous form it has their regularity and their power of action ; that in its voluntary form it is much less regular and powerful ; but that, in both cases, it is a sensitive excitation which causes it, maintains it, and measures it.

We see once more that the voluntary is bound up with the involuntary, supports itself on it, draws from it its force, and is in comparison with it very weak. The education of attention consists only in arousing and developing these factitious sentiments and in trying to render them stable by repetition ; but as there is no creation *ex nihilo*, they must have a natural basis, however slight it may be. To conclude this point, I will admit that I accept, for my part, the paradox of Helvetius, so often combated, "that all the intellectual differences among men come from attention alone," with the reservation that there is question *only* of spontaneous attention ; but then it amounts to no more than to say that the differences among men are innate and natural.

After having shown how attention is produced it remains to ascertain how it is kept up. The difficulty arises only in the case of voluntary attention. We have seen, in fact, that the maintenance of spontaneous attention explains itself. It is continuous because the excitation which causes it is continuous. On the contrary, the more voluntary attention is, the more effort it requires and the more unstable it is. Both cases reduce

themselves to a struggle between different states of consciousness. In the first case, one state of consciousness (or to say better, a group of states) is so intense that no struggle against it is possible and that it imposes itself by its living force. In the second case, the group has not in itself a sufficient intensity to impose itself ; it is enabled to do this only by an additional force, which is the intervention of the will. By what mechanism does it act? As it would seem, by an arrest of movements. We are thus brought back to the problem of inhibition, more obscure here than anywhere else. Let us see what can be supposed in regard to this. In the first place, it is hardly necessary to recall that the brain is a motor organ, that is to say that a great number of its elements are devoted to the production of movement and that there is not a single state of consciousness which does not in some degree contain motor elements. Hence it follows that every state of attention implies the existence of these elements. "In movements of the limbs and trunk the feelings of operation are very conspicuous ;* they are less so in the delicate adjustment of the eye, ear, etc., and are only inductively recognisable in the still more delicate adjustments of attention and comprehension, which are also acts of the mind in more than a metaphorical sense. The purest intellectual combinations involve motor impulses (feelings of operation) quite as necessarily as the combination of muscles in manipulation. The feelings of effort and relief in seeking and finding our way through an obscure and tangled mass of ideas—the tentatives of hypothesis and induction—are but fainter forms of the feelings in seeking and finding our way along a dark

* Lewes, *Problems of Life and of Mind*, third series, p. 397.

road or thick forest." Let us recall once more that every state of consciousness, especially when it is very intense, tends to pass into action, to express itself in movements, and that, as soon as it enters into its motory phase, it loses its intensity, it is in decline, it tends to disappear from consciousness.—But a present state of consciousness has another manner of expending itself, which is to transmit its tension to other states according to the mechanism of association. It is, if you like, an internal expenditure in place of an external one. At the same time the association which starts from the present state does not take place in one way only. In spontaneous attention, certain associations prevail alone and of themselves, by their own intensity. In voluntary attention (reflexion represents its highest form), we are conscious of an irradiation in several directions. Better yet, in the cases where we have much trouble to be attentive, the prevailing associations are those that we do not wish, that is to say which are not chosen, affirmed as the ones that ought to be maintained.

By what means, then, are the weaker ones maintained? In order to represent to ourselves so far as possible, what takes place in such a case, let us consider some facts which are analogous but of a more palpable kind. Let us take a man who is learning to play on an instrument or to handle a tool, or better still, a child who is learning to write. At the outset he produces a great number of completely useless movements; he moves his tongue, his head, his face, his legs, and it is only little by little that he learns to hold his organs in subjection and to limit himself to the necessary movements of the hands and eyes.

In voluntary attention things take place in an analo-

gous manner. The associations which diffuse themselves in all directions may be likened to these useless movements. The problem, in one case as in the other, is to substitute a limited and restrained diffusion for an unlimited diffusion. For that purpose, we check the associations which do not serve our end. Properly speaking, we do not suppress states of consciousness, but we prevent them from surviving and awakening analogous states, and from propagating themselves in their own way. We know, moreover, that this attempt is often unsuccessful, always difficult, and in certain cases has to be incessantly repeated. At the same time that we prevent this diffusion in all directions, the disposable nervous force is economised to our profit. To diminish the useless diffusion is to augment the useful concentration.

Such is the idea that one obtains of this obscure phenomenon when one tries to penetrate its mechanism, in place of having recourse to a pretended "faculty" of attention which explains nothing. We must, however, recognise with Ferrier that on what physiological basis this psychological faculty rests, is an extremely difficult question, and one hardly capable of an experimental determination.* We would add that the preceding pretends only to be an approximation, not an explanation.

*Op. cit., chapter xii. For a more detailed study of this question, we would refer to our *Psychology of Attention* [second edition, The Open Court Pub. Co., Chicago, 1894].

CHAPTER IV.

THE REALM OF CAPRICES.

TO WILL is to choose in order to act ; such is for us the formula of the normal will. The anomalies hitherto studied reduce themselves to two great groups : either the impulse is lacking, and no tendency to action is produced (abulia) ; or a too rapid or too intense impulse prevents a choice. Before examining the cases of obliteration of the will, that is to say those in which there is neither choice nor acts, we will study a type of character in which the will does not constitute itself at all or does so only in a wavering, unsteady and inefficient form. The best example of it that can be given is the hysterical character. Properly speaking we encounter here not so much a disorder as a constitutional state. The simple irresistible impulse is like an acute disease ; the permanent and invincible impulses resemble a chronic disease ; the hysterical character is a diathesis. It is a state in which the conditions of the existence of the will are nearly always lacking.

I borrow from the picture of the character of hysterics that Dr. Huchard has recently drawn, the features which relate to our subject : "A primary trait of their character is mobility. From day to day, from hour to hour, from minute to minute, they pass with an incredible rapidity from joy to sadness, from laugh-

ter to tears ; versatile, fantastic or capricious, they speak at certain moments with an astonishing loquacity, while at others they become gloomy and taciturn, keep a complete silence, or remain plunged in a state of reverie or of mental depression ; they are then seized with a vague and indefinable feeling of sadness, with a sensation of pressure in the throat, of a rising ball, or of epigastric oppression ; they burst into sobs, or they go to hide their tears in solitude, which they crave and seek ; at other times, on the contrary, they begin to laugh in an immoderate manner without serious motives. ‘They behave,’ says Ch. Richet, ‘like children that one sets to laughing with noises when they still have on their cheeks the tears that they have just shed.’

“Their character changes like the figures of a kaleidoscope, which has led Sydenham to say with reason that the most constant thing about them is their inconstancy. Yesterday they were lively, amiable and gracious ; to-day they are ill-humored, susceptible and irascible, vexed at everything and at nothing, capriciously disagreeable and sulky, discontented with their lot ; nothing interests them, they are wearied with everything. They experience a very great antipathy toward a person whom yesterday they loved and esteemed, or, on the contrary, show an incomprehensible sympathy for some one else ; so they follow certain persons with their hatred with as much bitterness as they had formerly had persistence in surrounding them with affection. . . .

“Sometimes their sensibility is exalted by the most trivial motives when it is hardly touched by the greatest emotions ; they remain almost indifferent, impassible even, at the announcement of a real misfortune,

and they shed tears abundantly and abandon themselves to the profoundest despair on account of a simple word falsely interpreted, and transform into an offence the lightest pleasantry. This sort of *moral ataxia* is observed even in regard to their dearest interests : one has the most complete indifference towards the misconduct of her husband ; another remains cold before danger which menaces her fortune. In turn gentle and passionate, says Moreau (of Tours), kind and cruel, impressionable to excess, rarely mistresses of their first movements, incapable of offering resistance to impulses of the most opposite nature, presenting a lack of equilibrium between the superior moral faculties, will and conscience, and the inferior faculties, the instincts, passions, and desires.

“This extreme mobility in their state of mind and their affective dispositions, this instability of character, this lack of fixity, this absence of stability in their ideas and their volitions, explain the incapacity which they experience of giving their attention very long to reading, study, or any kind of work.

“All these changes follow each other with the greatest rapidity. In this class of patients the impulses are not, as in the case of epileptics, absolutely uncontrolled by the intellect, but they are rapidly followed by action. This is the explanation of those sudden movements of anger and indignation, those headlong enthusiasms, those fits of despair, those explosions of mad gaiety, those great bursts of affection, those quick accessions of tenderness, or those sudden transports during which, acting like spoiled children, they stamp with their feet, break furniture, feel an irresistible need of striking something. . . .

“Hysterical patients act as they are led by their

passions. Almost all the various inconstancies of their character, of their mental state, can be summed up in these words: they do not know how to use their will, they cannot and will not do it. It is, indeed, because their will is always unsteady and faltering, because it is unceasingly in a state of unstable equilibrium, because it turns at the least wind like the weather-vane on our roofs; it is for all these reasons that hysterical patients have such mobility, such inconstancy, and such changeableness in their desires, their ideas, and their affections."*

This portrait is so complete that we need not prolong our comments. It has put before the readers' eyes that state of incoördination, of broken equilibrium, of anarchy, of "moral ataxia"; but we have yet to justify the statement that we made at the outset: that there is here a constitutional impotence of the will; that it cannot arise because the conditions of its existence are lacking. For the sake of clearness I will anticipate what is to be established with more details and proofs at the close of this work.

If we take an adult person, endowed with an average will, we will observe that his activity (that is to say, his power of producing acts) forms in general three planes: on the lowest are the automatic acts, simple or composite reflexes, habits; above are acts produced by the feelings, emotions, and passions; higher still are rational acts. This last stage presupposes the other two, rests on them, and consequently depends upon them, although it gives them co-ordination and unity. The capricious characters of which the hysteric is the type have only the two lower forms; the

* Axenfeld and Huchard, *Traité des névroses* (second edition, 1883), pp. 958-971.

third is, as it were, atrophied. By nature, save in rare exceptions, the rational activity is always the least strong. It obtains the mastery only on the condition that the ideas awaken certain feelings which are much more apt than they to express themselves in acts. We have seen that the more abstract ideas are, the weaker their motory tendencies. In hysterical patients the regulative ideas do not arise or remain sterile. It is because certain notions of the rational order (utility, propriety, duty, etc.) remain in the state of mere conceptions, because they are not *felt* by the individual, because they produce in him no affective response, do not enter into his substance, but remain like something brought in from outside; it is on these accounts that they are without action and for all practical purposes as if they did not exist. The power of individual action is maimed and incomplete. The tendency of the feelings and passions to show themselves in acts is doubly strong, both in itself and because there is nothing above it which checks and counterbalances it; and as it is a characteristic of the feelings to go straight to the goal, after the manner of reflexes, to have an adaptation in one single direction, unilateral (just the contrary to rational adaptation, which is multilateral), the desires, born quickly and immediately satisfied, leave free room for others, analogous or opposed, according to the perpetual variations of the individual. There exist only caprices, at most desires, a rough outline of volition.*

This fact, that desire goes in a single direction and tends to expend itself without delay, does not, how-

* Let us note in passing how necessary it is in psychology to take account of the ascending gradation of phenomena. Volition is not a clear and well-defined state which either exists or does not exist; there are sketches and attempts.

ever, explain the instability of the hysteric, nor his absence of will. If a desire always satisfied springs up again continually, there is stability. The predominance of the affective life does not necessarily exclude the will: an intense, stable, permitted passion is the very basis of all energetic wills. It is found in the great men of ambition, in the martyr unshaken in his faith, in the red-skin bidding defiance to his enemies in the midst of torments. It is necessary, then, to seek more deeply the cause of this instability in the hysteric, and this cause can be nothing else than a state of the individuality, that is to say, in the final reckoning, of the organism. We call that will strong whose end, whatever be its nature, is fixed. When circumstances change, means are changed; there take place successive adaptations to the new environment, but the centre towards which all converges does not change. Its stability expresses the permanency of character in the individual. If the same end continues to be chosen, approved, it is because that at bottom the individual remains the same. Let us suppose, on the contrary, an organism with unstable functions, whose unity—which is only a consensus—is continually dissolved and reconstituted on a new plan, according to the sudden variation of the functions that make it up; it is clear that in such a case choice can hardly arise, cannot last, and there remain only whims and caprices. This is what takes place in the hysteric. The instability is a fact. Its very probable cause is in functional disorders. Anæsthesia of special senses or of the general sensibility, hyperæsthesia in its various forms, motor disorders, contractures, convulsions, paralyse, derangements of the organic functions, vaso-motor, secretory, etc., occurring successively or simul-

taneously, keep the organism in a perpetual state of unstable equilibrium,* and the character, which is only the psychic expression of the organism, correspondingly varies. A stable character upon such an unsteady foundation would be a miracle. We find, therefore, the true cause of impotence of will to be here, and this impotence is, as we have said, constitutional.

Some facts contradictory in appearance really confirm this thesis. Hysterical patients are sometimes possessed by a *fixed* idea, which cannot be conquered. One refuses to eat, another to speak, another to see, because the labor of digestion, or the exercise of the voice or the sight would bring about, as they suppose, some suffering. One meets more frequently with that kind of paralysis which has been called "psychic" or "ideal." The hysteric stays in bed for weeks, months, and even years, believing herself unable to stand up or to walk. A moral shock, or the mere influence of some one who gains her confidence or acts with authority effects a cure. One begins to walk at the announcement of a fire, another gets up and goes to meet a long-absent brother, another decides to eat out of fear of the physician. Briquet, in his "*Traité de l'hystérie*," reports several cases of women whom he healed by inspiring them with faith in their recovery. There might also be mentioned a good number of those cures called miraculous which have attracted the public curiosity from the time of the deacon Paris to our own day.

The physiological causes of these paralyses are much in dispute. In the psychological order we observe the existence of a fixed idea the result of which is an inhibition. As an idea does not exist by itself and without certain cerebral conditions, as it is only a

* For the details of the facts see the work cited, pp. 987-1043.

part of a psycho-physiological whole—the conscious part—it must be admitted that it corresponds to an abnormal state of the organism, perhaps of the motor centres, and that it draws thence its origin. However that may be, it is not, as certain medical men have persistently maintained, an “exaltation” of the will; it is, on the contrary, its absence. We are recurring to a morbid type already studied, which differs from irresistible impulses only in form; it is inhibitory. But there is no direct reaction against the fixed idea on the individual’s own part. It is an influence from without which imposes itself and produces a contrary state of consciousness, with the concomitant feelings and physiological states. There results from this a powerful impulse to action, which suppresses and replaces the inhibitory state; but it is hardly a volition; at best it is a volition with another’s aid.

This group of facts brings us, then, to the same conclusion: an impotence of the will to form itself.*

* For the facts see Briquet, *Traité de l’hystérie*, chap. x; Axenfeld and Huchard, *op. cit.*, pp. 967–1012; Cruveilhier, *Anatomie pathologique*, book xxxv, p. 4; Macario, *Annales medico-psychologiques*, vol. iii, p. 62; Ch. Richet, in *Revue des Deux Mondes*, Jan. 15, 1880; P. Richer, *Etudes cliniques sur l’hystéro-épilepsie*, etc., part third, chap. ii, and the historic notes.

CHAPTER V.

THE EXTINCTION OF THE WILL.

The cases of extinction of the will, upon whose study we are now to enter, are those in which there is neither choice nor action. When all the psychic activity is or seems to be completely suspended, as in deep sleep, artificial anæsthesia, coma, and analogous states, it is a return to the vegetative life; we have nothing to say of this; the will disappears, because everything disappears. Here we have to do with cases where a form of mental activity persists, although there is no possibility of choice followed by action. This annihilation of the will is met with in ecstasy and in somnambulism.

I.

Various kinds of ecstasy have been distinguished: profane, mystical, morbid, physiological, cataleptic, somnambulic, etc. These distinctions do not concern us here, the mental state remaining the same at bottom. Most ecstasies reach that state naturally, as a result of their constitution. Others assist nature by artificial processes. The religious and philosophical literature of the Orient, of India in particular, abounds in documents from which it has been possible to gather a sort

of working manual for the attainment of ecstasy. To remain motionless, to gaze fixedly at the sky, a luminous object, the end of the nose, or, one's navel (like the monks of Mount Athos called *omphalopsychi*), to repeat continually the monosyllable *Om* (Brahm), while contemplating the Supreme Being; "to retain the breath," that is to say, to slacken one's respiration; "not to concern oneself either with time or with place"; such are the means which "make one resemble the placid light of a lamp set in a place where the wind does not blow." *

When this state is attained, the ecstatic presents certain physical characteristics: sometimes motionless and mute, sometimes expressing the vision that possesses him by words, songs, and attitudes. He rarely moves from his position. His physiognomy is expressive; but his eyes, even though open, do not see. Sounds no longer affect him; save, in some cases, the voice of a particular person. General sensibility is

* *Bhagavad-gita*, chap. vi. The Buddhist teachers say that there are four degrees in the contemplation which leads to the terrestrial Nirvāna.

The first degree is the inward feeling of happiness which arises in the soul of the ascetic when he considers himself to have at length come to distinguish the nature of things. The yogi is then detached from every desire but that of Nirvāna; he still reasons and exercises judgment; but he is freed from all the conditions of sin and vice.

In the second degree he is equally unstained by vice and sin, but in addition he has put aside judgment and reasoning; his intellect fixes itself upon Nirvāna alone, and simply feels the pleasure of interior satisfaction without judging of it or even understanding it.

In the third degree the pleasure of satisfaction has disappeared, and the sage has become indifferent in regard to the happiness that his intellect still experiences. The only pleasure which remains to him is a vague sense of physical well-being with which his whole body is inundated; he has still a confused consciousness of himself.

Finally, in the fourth degree, the yogi no longer possesses this sense of physical well-being, obscure as it is; he has also lost all memory; he has even lost the sense of his indifference. Free from all pleasure and from all suffering, he has attained to impassibility, and is as near to Nirvāna as he can be during this life. (Barth. Saint-Hilaire, *Le Bouddha et sa religion*, pp. 136, 137.)

extinct ; no contact is felt ; neither pricking nor burning causes pain.

What he inwardly experiences, the ecstatic alone can tell, and were it not that he retains at waking a very distinct recollection of it, the profane would be reduced to inductions regarding it. The narratives and writings of ecstasies show, in the midst of differences of race, of belief, of mind, of time and of place, a striking uniformity. Their mental state reduces itself to one image-idea, either alone or constituting the nucleus of a single group which engrosses the entire consciousness and maintains itself in it with an extreme intensity. Several mystics have described this state with great delicacy, above all St. Teresa. I therefore extract a few passages from her autobiography, in order to place before the reader an authentic description of the ecstasy.

For uniting oneself to God, there are four degrees of "prayer," which she compares to four methods, each easier than the preceding, of watering a garden : "the first by drawing water from a well by strength of arm which is severe labor ; the second, by drawing it up with a *noria* (a hydraulic machine), in which way there is obtained with less fatigue a greater quantity of water ; the third by conducting the water from a river or brook ; the fourth, and incomparably the best, is an abundant rain, God himself undertaking the watering without the slightest fatigue on our part" (chap. xi).

In the two first degrees, there are as yet only attempts at ecstasy which the saint notes in passing : "Sometimes while reading I was suddenly seized with a feeling of the presence of God. It was absolutely impossible for me to doubt that he was within me, or that I was wholly lost in him. This was not a

vision. . . . It suspends the soul in such wise that it seems to be utterly beside itself. The will loves, memory appears to me almost gone, the understanding does not act, and nevertheless it does not lose itself." In a higher degree which is "neither a rapture nor a spiritual sleep," "the will alone acts, and, without knowing how it becomes captive, it simply gives to God its consent, that he may imprison it, secure of falling into the fetters of Him whom it loves. . . . The understanding and memory come to the assistance of the will, that it may render itself more and more capable of enjoying so great a good. Sometimes, however, their aid serves only to trouble it in this intimate union with God. But then the will, without allowing itself to be disturbed by their importunity, should keep itself in the delight and the profound calm which it is enjoying. To try to fix its two powers [faculties] would be to carry them away with it. They are then like doves which, discontented with the food that their master gives them without any effort on their part, go to look for some elsewhere, but which, after a vain search, hasten to return to the dove-cote." In this degree, "I regard it as a very great advantage, when I write, to find myself actually in the prayer of which I am treating, for I see clearly then that neither the expression nor the thought comes from me; and when it is written, I can no longer understand how I have been able to do it, which happens to me often."

In the third degree we come to the ecstasy: "This state is a sleep of the powers [faculties] wherein, without being entirely lost in God, they nevertheless do not understand how they operate. . . . It is like some one who, sighing after death, holds already in the hand the blessed candle and has only one breath more to ex-

hale in order to see itself at the consummation of its desires. It is for the soul an agony full of inexpressible delight, wherein it feels itself almost entirely dying to all the things of earth and reposes with rapture in the enjoyment of its God. I find no other terms to depict or explain what it experiences. In this state it does not know what to do : it does not know whether it is speaking or is silent ; whether it laughs or weeps ; it is a glorious delirium, a celestial madness, a supremely delicious kind of enjoyment. . . . While it thus seeks its God, the soul feels itself with a very keen and very sweet pleasure almost fainting away ; it falls into a species of swoon which little by little deprives the body of respiration and of all its strength. It cannot, without a very painful effort make even the slightest movement of the hands. The eyes close without its wishing to close them, and, if it keeps them open, it sees almost nothing. It is incapable of reading, had it the desire to ; it indeed perceives the letters, but, as the mind does not act, it can neither distinguish nor associate them. When spoken to, it hears the sound of the voice, but not distinct words. So it receives no service from its senses. . . . All exterior forces abandon it : feeling thereby its own increase it can better enjoy its glory. . . . In truth, to judge of it by my experience, this prayer is at first of such short duration that it does not reveal itself in so manifest a way by external signs and the suspension of the senses. It is to be remarked, at least in my opinion, that this suspension of all the powers never lasts long ; it is very much when it reaches a half hour, and I do not think that with me it has ever lasted so long. It must be admitted, however, that it is difficult to judge of it, since one is at the time deprived of feeling. I wish simply to make

this observation : whenever this general suspension takes place, very little time elapses in which one or another of the powers does not return to itself. The will is the one which maintains itself best in the divine union, but the two others very soon begin to importune it. As it is in the calm, it brings them back and suspends them anew ; they remain thus tranquil some minutes and then take up again their natural life. The prayer, with these alternations, can and does prolong itself, in fact, for some hours. . . . But that state of complete ecstasy, in which the imagination, which I hold to be equally rapt, does not wander to any external object, is, I repeat, of short duration. I would add that the powers returning to themselves only imperfectly, they may remain in a sort of delirium for some hours, during which God from time to time enraptures them anew, and fixes them in himself. . . . What transpires in this secret union is so hidden that one would not know how to speak of it more clearly. The soul then sees itself so near God and possesses such a certainty of it, that it cannot have the slightest doubt as to the reality of such a favor. All its powers lose their natural activity; they have no knowledge of their operations. . . . That troublesome butterfly of memory sees then its wings scorched here, and it is no longer able to flit hither and thither. The will is no doubt occupied in loving, but it does not understand how it loves. In regard to the understanding, if it understands, it is by a mode which remains unknown to it, and it can comprehend nothing of what it understands." *

I will not follow St. Teresa in her description of

* *Vie de Sainte Thérèse écrite par elle-même*, translated by Rev. Father Bouix (tenth edition), pp. 90, 91, 96, 138, 142, 157, 177-180. Compare also Plotinus, *Ennéades*, vi ; Tauler, *Institution chrétienne*, chapters xii, xxvi, xxxv.

the "rapture" (chapter xx), "that divine eagle, which with a sudden impetuosity seizes you and carries you off." These extracts suffice, and any one who reads them with attention will not hesitate to attribute to them all the value of a good psychological observation.*

In examining the detailed narratives of other ecstasies (which I cannot recount here), I find that for our purposes may be conveniently established two categories.

In the first, motility persists to a certain extent. The ecstatic follows in its development and reproduces with appropriate movements the Passion, the Nativity, or some other religious drama. There is a series of very intense images, having an invariable point of departure, an order of succession which repeats itself each time with perfect automatism. Maria von Moerl and Louise Lateau are well known examples of this.

The other category is that of ecstasy in repose. Ideas alone reign, ordinarily abstract or metaphysical: God for St. Teresa and Plotinus, better still the Nirvâna of the Buddhists. Movements are suppressed; henceforth one feels "only a residuum of interior agitation."

* St. Teresa thus describes her physical state during her "raptures": "Often my body became so light that it no longer possessed weight; some times it was so to such a point that I no more felt my feet touching the ground. So long as the body is in the rapture, it remains as if dead and often is absolutely powerless to act. It preserves the attitude in which it has been surprised: thus it remains standing or seated, the hands open or closed, in a word in the state in which it was overtaken by the rapture. Although ordinarily one does not lose feeling, it has happened to me, however, to be entirely deprived of it. This has been rare and has lasted only a very short time. Most frequently feeling remains; but one experiences an indefinable trouble, and, although it is impossible to perform any external act, one does not cease to hear: it is like a confused sound coming from a distance. Moreover, even this kind of hearing ceases when the rapture is at its highest degree." (Ibid., p. 206.)

Let us remark in passing how well this agrees with what has been previously said : that in abstract ideas the tendency to movement is at its minimum ; that these ideas being representations of representations, pure schemata, the motor element is weakened in the same degree as the representative element.

But in both cases the mental state of ecstasy is a complete infraction of the laws of the normal mechanism of consciousness. Consciousness exists only under the condition of a perpetual change ; it is essentially discontinuous. An homogeneous and continuous consciousness is an impossibility. Ecstasy realises all that is possible of this continuity ; but St. Teresa has just told us that either consciousness disappears, or else understanding and memory—that is to say, discontinuity—come back at intervals and revive the consciousness.

This psychological anomaly is complicated with another. Every state of consciousness tends to expend itself in proportion to its intensity. In the highest ecstasy, the expenditure is null or nearly so, and it is thanks to the absence of this motor phase that the intellectual intensity is maintained. The brain, in the normal state an intellectual and motor organ at the same time, ceases to be motor. Moreover, in the intellectual order, the heterogeneous and manifold states of consciousness which constitute the ordinary life have disappeared. The sensations are suppressed ; with them, the associations that they awaken. One unique representation absorbs all. If the normal psychic activity be compared to a circulating capital, continually modified by receipts and expenses, it may be said that here the capital is massed in one sum ; diffusion becomes concentration, the extensive is trans-

formed into intensive. There is nothing astonishing then, if in this state of intellectual erethism, the ecstatic appears transfigured, above herself. Certainly the visions of the rude peasant girl of Sanderet who saw a Virgin all of gold in a paradise of silver, have little resemblance to those of a St. Teresa or a Plotinus; but every intellect at the moment of ecstasy yields its maximum.

Is it very necessary now to investigate why, in this state, there is neither choice nor action? How could there be choice, since choice supposes the existence of that complex whole called the ego, which has disappeared; since, the personality being reduced to one idea or a single vision, there is no state which can be chosen, that is to say, incorporated in the whole, to the exclusion of others; since, in a word, there is nothing which can choose, nothing which can be chosen? As well might an election be supposed without electors or candidates.

Action is thus dried up in its source, annihilated. There remain of it only the elementary forms (respiratory movements, etc.), without which organic life would be impossible. We have here a curious case of psychological correlation or antagonism: all that one function gains is lost by another; all that is gained by thought is lost by movement. In this respect, ecstasy is the opposite of the states in which motility triumphs, such as epilepsy, chorea, and convulsions. Here, we see a maximum of movement with minimum of consciousness; there, intensity of consciousness, with minimum of movement. There is at any moment only a certain nervous and psychic capital disponible; if it be absorbed by one function, it is to the detriment of

the others. Its employment in one direction or the other depends on the nature of the individual.

After having studied the annihilation of the will in its highest form, let us remark that in contemplation and profound reflexion may be found modified and diminishing forms of this annihilation. The inaptitude of contemplative minds for action has physiological and psychological reasons of which ecstasy has given us the secret.

II.

A

It would be as interesting for the psychologist as for the physiologist to know what produces abolition of consciousness in natural or provoked somnambulism, and from what organic conditions it results. In spite of the labors carried on with ardor during these last years there only exist theories on this point, and one can take one's choice among several hypotheses. Some, like Schneider and Berger, make it a result of "expectant attention," producing a one-sided and abnormal concentration of consciousness. Preyer sees in it a special case of his theory of sleep. Others, like Rumpf, suppose that there are reflex changes in the cerebral circulation, phenomena of hyperæmia and anæmia in the surface of the hemispheres of the brain. Heidenhain, who combats this last theory, explains hypnotism by an inhibitive action. There might take place a suspension of activity in the cortical nerve-cells, perhaps by a change in molecular arrangement: in this way the functional movement of the grey matter would be interrupted. This last hypothesis is that which appears to gain the most adherents. As it is hardly more than a simple statement of

fact, from the psychological point of view at least, we may adhere to it.

It would be useless to describe a state so often and so carefully described before.* We simply remark that the terms somnambulism, hypnotism, and their analogues, do not designate a state identical everywhere and in all. This state varies in the same individual from simple drowsiness to profound stupor; and from one individual to another, according to the constitution, habit, pathological conditions, etc. So it would be illegitimate to affirm that there is always annihilation of the power of will. We shall see that there are some very doubtful cases.

Let us first take hypnotism in the form that several authors have called lethargic. The mental inertia is absolute; consciousness is abolished; the reflexes are exaggerated, an exaggeration which goes on concurrently with the enfeeblement of the higher activity. At the voice of the operator the hypnotised subject stands up, walks, sits down, sees absent persons, travels, describes landscapes. He has, as the phrase goes, no will but that of the operator. That signifies, in more precise terms: In the empty field of consciousness a state is called up; and, as every state of consciousness tends to pass into act,—immediately or after having awakened associations,—the act ensues. This is only one case of a well-known law which is the analogue in the psychological order of the reflex in the physiological order; and the passing into action is here so much the easier as there is nothing to hinder it, neither inhibitive power nor antagonistic state, the suggested idea reigning alone in the slumbering con-

* See in particular the articles by Mr. Ch. Richet in the *Revue philosophique* for October and November, 1880, and for March, 1883.

sciousness.—Some facts stranger in appearance are explained in the same way. We know that by giving to the members of a hypnotised person certain appropriate postures there is awakened in him an emotion of pride, terror, humility, or piety; that if they are placed in a position for climbing, he attempts to go up a ladder; and that if there is put into his hands any instrument of customary labor, he goes to work. It is clear that the position imposed upon the members awakens in the cerebral centres the corresponding states of consciousness, with which they have become associated by numerous repetitions. The idea once awakened is in the same condition as that arising from a command or a direct suggestion of the operator. All these cases, therefore, are reducible to the same formula: the hypnotised subject is an automaton which is made to move according to the nature of its organisation. There is an absolute annihilation of the will, the conscious personality being reduced to one single and unique state, which is neither chosen nor repudiated, but undergone, imposed.

* In natural somnambulism the automatism is spontaneous, that is to say, it has as its antecedent some particular excitation in the organism. Here the automatism is often of a superior kind; the series of states aroused is long, and each term of the series is complex. As a type of this there can be given the singer whose history Mesnet has related.* If one offer him a cane that he takes for a gun, his military recollections are revived; he loads his weapon, lies flat upon his stomach, takes careful aim and fires. If a roll of paper be handed to him, the memories of his present calling

* *De l'automatisme de la mémoire et du souvenir dans le somnambulisme pathologique* (Paris, 1874). See also P. Richer, op. cit., p. 391 et seqq.

are aroused ; he unrolls it and sings in a loud voice. But the unvarying repetition each time of the same acts in the same order, gives to all these facts the character of a very clear automatism, from which all will is excluded.

There are, however, equivocal cases. Burdach tells us of a "very fine ode," composed in a state of somnambulism. The story has often been cited of that abbé who, composing a sermon, corrected and touched up his sentences, and changed the place of epithets. Another person tries several times to commit suicide, and at each attack employs new means. The facts of this kind are so numerous that, even making allowance for credulity and exaggeration, it is impossible to reject them.

It may be said : Such acts suppose a comparison, followed by a choice, a preference ; and this is what is called a volition. There would then exist a voluntary power, that is to say, a true reaction of the individual—faint, obscure, limited, but active nevertheless.

But it can also be maintained that automatism by itself is sufficient. Is it not a recognised truth that, in the normal state, intellectual work is often automatic and that it is only worth more on that account? What poets call inspiration, is it not a cerebral labor which is involuntary, almost unconscious, or which, at least, reaches the consciousness only in the form of results? We read over our own writings, and our corrections are often spontaneous, that is to say, the movement of thought brings a new association of words and ideas which substitutes itself immediately for the other. So it may be that the individual, as a being that chooses and prefers, counts in it for nothing. On more minute examination, it may be held that all these cases are not

rigorously comparable ; that, if for composing an ode automatism suffices, for correcting it it does not suffice ; and that, in this last case, there is a choice, however rapid and insignificant we may suppose it to be. In place of a zero of will, we should have a minimum of will. This opinion would come to the same thing as the first one, or would be separated from it only by a shade.

The reader may choose between these two interpretations. I pass on to cases where the data are clearer.

There are among hypnotised subjects numerous instances of *resistance*. An order is not obeyed, a suggestion does not immediately impose itself. The magnetisers of the last century recommended to the operator a tone of authority and to the subject the faith, the confidence which produces consent and prevents resistance.

“While in a state of somnambulism, B. performed certain acts at command, but refused to perform others. Most frequently she would not read, although we satisfied ourselves that she could see, in spite of the apparent occlusion of the eyelids. . . . When her hands were placed in the attitude of prayer her mind was impressed accordingly. When questioned, she replied that she was praying to the Holy Virgin, but that she did not see her. As long as her hands remained in that position, she continued her prayer and *did not disguise her displeasure* if any one sought to distract her. On displacing her hands, the prayer ceased immediately. As inevitable as it is, the prayer, in this case, is in some sort rational, since the patient resists distractions and is able to carry on a discussion with any one who tries to interrupt her.”*

One of Ch. Richet's subjects who allowed himself

* P. Richet, *Etude sur l'hystéro-épilepsie*, pp. 426, 427.

without any difficulty to be metamorphosed into an officer, a sailor, etc., refused on the contrary, with tears in his eyes, to be changed into a priest; which the character and habits of the subject and the environment in which he had lived sufficiently explained.

There are, then, phases in which two states coexist: one produced by an influence from without, the other by an influence from within. We know the automatic power of the first. Here the contrary state interferes with it; there exists something which resembles a power of inhibition. But this power is so weak that it ordinarily yields to repeated attacks, and so vague that its nature cannot be determined. Is it more than an antagonistic state of consciousness aroused by the suggestion itself, in such wise that all would be reduced to the coexistence of two contrary states? Is it more complex, and must it be admitted that it represents the sum of the tendencies still existing in the individual and some remains of what constitutes his character?—If Heidenhain's theory be accepted there must be, in the state called lethargic, a complete arrest of the functional activity; the command or suggestion would bring into play an exceedingly limited number of neural elements in the cortical layer; finally, in the state of resistance there would arise from their sleep some of those elements which, in the normal state, form the physiological and psychological basis of the individual, being the synthetic expression of its organism. It must be avowed that, even admitting this second hypothesis, what would remain of voluntary power, of capacity in the individual to react according to his nature would be an embryo, a power so denuded of efficacy that it can hardly be called a will.

We would further remark that, if it is difficult for

the observer to divine what power of reaction persists in the person who resists, the latter is a still worse judge of it.

“An attentive analysis of the phenomena, such as can be made by educated and intelligent men, who have consented to undergo the action of the magnetism, show how difficult it is even for the hypnotised subject to make himself understand that he is not simulating. To make these observations the sleep need not be very profound. . . . At the period of *lethargy*, the consciousness is preserved, and yet a commencement of automatism is very manifest.

“A physician of Breslau had affirmed to Mr. Heidenhain that the magnetism made no impression upon him; but after he had been thrown into the lethargic state he could not pronounce a single word. When awakened, he declared that he could have spoken easily enough and that, if he had said nothing, it was because he had not wished to say anything. Being lethargised anew by a few passes, he was again unable to speak. He was awakened once more and had to recognise that, if he had not spoken, it was because he could not speak.

“One of my friends, having been merely lethargised and not altogether put to sleep, studied closely this phenomenon of impotence coinciding with the illusion of power. When I indicate to him a movement he always executes it, even when before being magnetised he had fully determined to resist me. This he has the utmost difficulty in understanding on awakening. ‘Certainly,’ he said to me, ‘I could resist, but I have not the will to do so.’ So he is sometimes tempted to believe that he is simulating. ‘When I am lethargised,’ he said to me, ‘I feign automatism, although I could,

it seems to me, do otherwise. I come with the firm determination not to pretend, and, in spite of myself, as soon as the sleep begins it seems to me that I do it.' It can be seen that this kind of simulation of a phenomenon is absolutely indistinguishable from the reality of that phenomenon. Automatism is proven by the single fact that persons in good faith are unable to act otherwise than as automata. It signifies little that they imagine themselves able to resist. They do not resist. That is the fact which should be taken into consideration, and not the illusion that they cherish of their alleged power of resistance." *

This power of resistance, however, as feeble as it is, is not equal to zero; it is a last survival of the individual reaction, extremely reduced; it is on the threshold of extinction, but without passing over it. The illusion of this feeble power of inhibition must correspond to some physiological state equally precarious. Upon the whole, the state of natural or provoked somnambulism may justly be regarded as an abolition of the will. The exceptional cases are rare and obscure; yet they contribute their share of instruction. They show once more that volition is not an invariable quantity, but that it decreases to a point where it may be equally maintained either that it does or does not exist.

I will mention in passing a fact which hardly enters into the pathology of the will, but which furnishes matter for reflexion. There may be given to certain hypnotised subjects an order to perform an action later on, at a given moment in the day, or even at a more distant date (in eight, ten days). Having returned to themselves they carry out the order at the hour re-

* Ch. Richet, article cited, pp. 348, 349.

quired, on the prescribed day, ordinarily declaring "that they do not know why." In some more curious cases these persons *give specious reasons to explain their conduct*, to justify this act which does not spring from their own spontaneity, but is imposed upon them without their knowledge.

I cite a case that came under my own observation. A young man at ten o'clock ordered his mistress, who was in the hypnotic state, to leave him at three o'clock in the morning; then he restored her to the normal state. Toward three o'clock she awoke and made ready to go, and though he begged her to stay, she found reasons to excuse and justify her going at that unreasonable hour.*

"Our illusion of free will," says Spinoza, "is only ignorance of the motives which make us act." Do not this fact and analogous ones confirm this?†

* This paragraph, though left out of the eighth French edition, was present in the early ones. It is retained for the sake of completeness.—*Trans.*

† The state of the will in hypnotised persons has given rise lately to very warm discussions of much practical importance. We have seen that it is easy during hypnosis to require of certain subjects acts which they are to perform at a date determined. There is a complete forgetfulness of the injunction on awakening and, as it would seem, up to the moment when the specified time has come. Does not the hypnotised person thus become a passive instrument in the operator's hands by the annihilation of his will?

Two contrary opinions have been maintained. According to the School of Nancy (Liébault, Beaunis, Bernheim, Liégeois) the confiscation of the will is complete, and all resistance to the injunctions is vanquished in the long run, in the freely suggestible person, who thus becomes *perinde ac cadaver*.

The School of Paris (Charcot, Brouardel, etc.) rejects this absolute theory, "which rests only upon laboratory crimes" (that is to say, ones which are factitious, simulated, executed for compliance sake). It maintains that resistance is possible. Very weak, when the act commanded is a trivial one, it would be augmented in proportion to the gravity of the act suggested. This resistance might manifest itself in several manners: refusal to awaken if the command is not revoked, sleep or crisis at the moment when it is to be carried out, etc. "The hypnotised person executes only what he has no objection to doing." For this discussion consult Beaunis, *Le somnambulisme provoqué*; Bernheim, *De la suggestion, etc.*; Liégeois, *De la suggestion et du somnambulisme*; Pitres, *Des suggestions hypnotiques*; Gilles de la Tourette, *L'hypnotisme et les états analogues, etc.*

CHAPTER VI.

CONCLUSION.

I.

HAVING examined the various morbid types, let us see whether a law can be discovered which sums up the pathology of the will and throws some light upon its normal state.

Volition exists only as a fact, that is to say, a choice followed by acts. For it to be produced, certain conditions are necessary. A lack of impulse or inhibition, an exaggeration of automatic activity, of a tendency, a desire, a fixed idea, prevent it from existing for a moment, an hour, a day, or a period of life. The sum of these conditions, necessary and sufficient, may be called will. In relation to the volitions it is a cause, although it is itself a sum of effects, a resultant varying with its elements ; pathology has demonstrated this to us.

These elements, which I indicate briefly, are :

1) The tendencies to action (or to inhibition) which result from circumstances, from the environment, from advice, from education ; in a word, all those which are the effect of exterior causes.

2) The character, which is the principal element, the effect of interior causes, and not an entity but the resultant of that myriad of infinitely minute states and tendencies of all the anatomical elements which con-

stitutes a certain organism ; in shorter terms, character is for us the psychological expression of a certain organised body, drawing from it its peculiar coloring, its special tone, and its relative permanence. That is the ultimate stratum upon which rests the possibility of the will, and which makes it energetic, weak, intermittent, commonplace, extraordinary.

Now, if we consider the will no longer in its constituent elements, but in the phases that it passes through in forming itself, we see that volition is the last term of a progressive evolution of which the simple reflex is the first round ; it is the highest form of activity,—understood always in the precise sense of power to produce acts, power of reaction.

It has for its basis a legacy from numberless generations, enregistered in the organism ; this is the primitive automatic activity, simply co-ordinated, almost invariable, and unconscious, although it must in remote ages have been accompanied by a rudiment of consciousness which has withdrawn from it in proportion as the co-ordination, becoming more perfect, has organised itself in the species.

Upon this basis rests the conscious and individual activity of the appetites, desires, feelings, and passions, with a more complex and much less stable co-ordination.

Higher still is the ideo-motor activity, which in its extreme manifestations attains a co-ordination at once very firm and very complex,—this is complete volition.

It may therefore be said that it has as its fundamental condition a *hierarchic co-ordination*, that is to say, that it does not suffice for reflexes to be co-ordinated with reflexes, desires with desires, rational tendencies with rational tendencies ; but that a co-ordination between

these different groups is necessary,—a co-ordination with subordination, such that all converges towards a single point : the end to be attained. Let the reader recall the morbid cases studied in the preceding pages, in particular the irresistible impulses which, by themselves alone, represent almost the entire pathology of the will, and he will recognise that they all may be reduced to this formula : absence of hierarchic co-ordination, action which is independent, irregular, isolated, anarchical.

Hence if we consider the will either in its constituent elements or in the successive phases of its genesis (and the two aspects are inseparable), we see that volition, its last result, is not an event appearing one knows not whence, but that it plunges its roots into the profoundest depths of the individual and, beyond the individual, into the species, and into all species. It does not come from above, but from below ; it is a sublimation of inferior elements. I would compare volition, once affirmed, to what is called in architecture the keystone of an arch. To it the arch owes more than its solidity,—its existence ; but this stone derives its power wholly from the others which sustain it and shut it in, as in its turn it presses upon them and holds them in place.

These much condensed preliminaries were indispensable to an understanding of the law which governs the dissolution of the will ; for, if the preceding considerations are just, then since dissolution always follows the inverse order of evolution, it results that the more complex manifestations of will must disappear before the simpler ones, and the more simple before the automatic activity. In order to give to the statement of the law its exact form, treating volition, not as a

singular event, but as the highest manifestation of activity, we will say: *Dissolution pursues a regressive course from the more voluntary and more complex toward the less voluntary and simpler, that is to say, toward the automatic.*

We have now to show that this law is verified by the facts. We have only to choose among many.

In 1868, Hughlings Jackson, while studying certain disorders of the nervous system, called attention, for the first time I think, to the fact "that the most voluntary and specialised movements and faculties are attacked first and more than the others."* This "principle of dissolution" or "of reduction to a more automatic state" was laid down by him as the correlative of Herbert Spencer's doctrines regarding the evolution of the nervous system. He takes one of the simplest cases, general hemiplegia from lesion of the corpus striatum. A clot of blood has made for us an experiment. We see that the patient whose face, tongue, arm, and leg are paralysed has lost the more voluntary movements of a portion of his body, without losing the more automatic ones. "The study of cases of hemiplegia shows us in effect that the external parts that suffer the most are those which, psychologically speaking, are the most under the command of the will, and which, physiologically speaking, imply the greatest number of different movements, produced with the greatest number of different intervals," in place of being simultaneous like automatic movements. If the lesion is more serious, and if it affect not only the more voluntary parts of the body (face, arm, leg), but those also which are less voluntary (loss of certain movements of

* *Clinical and Physiological Researches on the Nervous System* (London, 1875).

the eyes and of the head, and of one side of the chest), the more voluntary parts are found to be much more paralysed than the others.

Ferrier remarks* similarly that the general destruction of the motor region in the cortex of the brain, like that of the corpus striatum, produces "the same relative disorders of the different movements, those being the most affected and paralysed which are most under the influence of the will, at least after the first shock is passed. Facial paralysis has its seat specially in the lower facial region, attacking the more independent movements, the frontal and orbicular muscles being only slightly affected. The movements of the leg are less affected than those of the arm, those of the arm less than those of the hand."

The same author, drawing a distinction between the different *kinds* of movements and their respective centres, "those which imply consciousness and which we call voluntary in the strict sense of the word" (the higher cortical centres) and those "which are described as automatic, instinctive, responsive, including the motor adaptations of equilibrium and of motor co-ordination, and the instinctive expression of emotions, and which are organised more or less completely in the centres subjacent to the cortex," observes that these latter have a relative independence which is at a maximum in the lower vertebrates (the frog, the pigeon), and at a minimum in the monkey and the man. "I ventured to predict," he adds, "that in animals whose motor faculties did not seem to suffer much from a destructive lesion of the nervous centres, those movements must be paralysed which imply consciousness (voluntary

*Ferrier, *Localisation of Diseases of the Brain* (French translation, p. 142).

movements) and are not automatically organised. This has been fully confirmed by the researches of Goltz. He has shown that, although the paw of a dog may not be positively paralysed in so far as it is an organ of locomotion, by a lesion of the cortex, it is so, *in so far as it serves as a hand and is employed as such.*" *

This last experiment is of the greatest interest for us; it shows us that, in one same organ adapted at once to locomotion and to prehension, the first function persists, although impaired, when the latter, the more delicate one, has disappeared.

The instability of the action that is voluntary, complex, superior (which all comes to the same thing), in comparison with the automatic, simple, inferior action, shows itself again in a *progressive* form in the general paralysis of the insane. "The first imperfections of motility," says Foville, "those which show themselves as a barely incipient defect in the harmony of the muscular contractions, are so much the more appreciable as they concern more delicate movements, requiring a greater precision and perfection in their performance. So it is not astonishing that they express themselves *first* in the very delicate muscular operations which co-operate in phonation." It is known that an impediment in speech is one of the first symptoms of this malady. At first so slight that only a practised ear is capable of detecting it, the trouble in pronunciation

* Ferrier, pp. 36, 37. In the experiment of Goltz, if the lesion is made in the left brain, in any movement in which the dog is accustomed to use the front paw as a *hand*, he neglects the use of the right paw. Thus he will hold a bone with the left fore paw only; and it is this paw only that he will use to dig in the ground or to reach up to his wound. If the animal has been trained to give his paw on command, after the mutilation he will give only his left paw, while he will hold the right one as if nailed to the ground. (Goltz, in *Dictionnaire encyclopédique des sciences médicales*, article "Nerveux," p. 588.)

increases progressively and finally results in an unintelligible jabber.

“The muscles which contribute to articulation have lost all their harmony of action ; they can no longer contract except with effort ; and the speech has become unrecognisable.

“In the members, the lesions of motility affect at first only the movements involving the most of minutiae and of precision. The patient can take long walks and use his arms in kinds of work which require only co-ordinated movements ; but he can no longer execute little delicate operations of the fingers, without trembling a little and trying several times over ; it is particularly noticeable when he is asked to pick up a pin from the ground, to wind his watch, etc. Artisans accustomed in their trade to tasks of precision, are incapacitated for occupation much sooner than those who have only coarse labors to perform. When there is writing to be done the pen is held with an indecision which manifests itself by a more or less pronounced irregularity of the characters traced. The farther the malady progresses in its course the more tremulous and irregular the hand-writing becomes ; so that, by comparing a series of letters written at different epochs, one may follow the successive stages of the affection until the patient has become incapable of writing.

“Later on, the indecision of the upper members extends even to the general movements ; the trembling and enfeeblement prevent the patient from carrying his food directly to his mouth, from taking out his handkerchief, from putting it back in his pocket, etc.

“In the lower members the progression is analogous ; at the outset, the paralytic insane walk with vigor when going straight ahead, but if they have to

turn to the right or the left, and especially to wheel around in order to retrace their steps, the hesitation and lack of precision make themselves apparent. Later on, even when walking ahead, they advance with a heavy and ill-coördinated step. Still later they have difficulty in walking even a few steps." *

Let us recall again the troubles in motility which follow the abuse of alcohol. Tremor is one of the earliest phenomena. "The hands are the first parts affected, then the arms, the legs, the tongue and the lips. In proportion as it increases, the tremulousness is generally complicated with another graver disorder, muscular debility. It affects at first the *upper* members; that is an almost constant character. The fingers become unskilful, awkward; the hand holds objects imperfectly and lets them slip. Then this weakness extends to the forearm and the arm; the patient is thus unable to use his upper members except in a very imperfect way; he comes at last to be no longer able to eat alone. Later these phenomena extend to the *lower* members; standing becomes difficult, the walk is uncertain, staggering; and all these symptoms go on increasing. The muscles of the back are attacked in their turn . . . and the unfortunate paralytic is condemned to keep his bed." †

We might recall again what takes place in convulsions, chorea, etc. This progress, which for the physician has only a clinical interest, has for us a psychological interest. These facts of daily experience will suffice, I hope, to produce the conviction, nay to demonstrate, that the law of dissolution does indeed pursue

* Foville, *Dictionnaire de médecine, etc.*, article "Paralysie générale," pp. 97-99.

† Fournier, *ibid.*, article "Alcoholism," pp. 636, 637.

a course from the complex to the simple, from the voluntary to the automatic, and that the last term of evolution is the first of dissolution. We have studied hitherto, it is true, only a disorganisation of movements ; but those who treat psychology as a natural science will find here nothing that needs to be restated. As volition is not for us an imperative entity, reigning in a world apart and distinct from its acts, but rather the ultimate expression of a hierarchic co-ordination, and as each movement or group of movements is represented in the neural centres, it is clear that with each group that is paralysed one element of the co-ordination disappears. If the dissolution is progressive, the co-ordination, continually despoiled of some element, will become continually more and more restricted ; and, as experience shows that the disappearance of the movements is in direct proportion to their complexity and their delicacy, our thesis is verified.

We may moreover follow out this verification of our law by recalling what takes place in the diseases of speech, and here we penetrate into the inmost mechanism of the mind. I shall not go over a subject that I have treated at length.* I have endeavored to show that many cases of aphasia result from a motor amnesia, that is to say, from a forgetfulness of motor elements, of those movements which constitute articulate speech. I will recall what Trousseau had already remarked, that "aphasia is always reducible to a loss of memory either of the vocal signs, or of the means by which the words are articulated ; that W. Ogle also distinguishes two verbal memories : a first one, recognised by everybody, whereby we are conscious of the word, and a second in

* See *Les maladies de la mémoire*, p. 119 et seqq. (English translation, vol. 41, *International Scientific Series*.)

addition, by which we are enabled to utter it." This forgetfulness of the movements, although it is primarily a disease of the memory, reveals to us also a weakening of motor power, a disorder of voluntary co-ordination. The patient wishes to express himself; his volition has no result or expresses itself imperfectly, that is to say, the sum of the co-ordinated tendencies which at the present moment constitute the individual in so far as he wishes to express himself, is partially hindered in its passage into action; and experience teaches us that this impotence of expression first attacks the words, that is to say, rational language; afterwards the exclamatory phrases, the interjections, what Max Müller designates by the name of emotional language; and finally, in very rare cases, the gestures. Here again, then, the dissolution proceeds from the more complex to the less complex and the simple, from the voluntary to the semi-voluntary and the automatic, which latter is almost always left intact.

One might go farther still into the purely psychic life; but here all becomes vague and uncertain. As we can no longer connect each volition with a group of movements of the vocal, locomotor, or prehensile organs, we are in the dark. However, it is impossible not to observe that the highest form of volition, voluntary attention, is the rarest and most unstable of all. If, in place of considering the voluntary attention* after the fashion of the subjective psychologist who studies himself and goes no farther, we consider it in the mass of healthy adult human beings, in order to determine approximately what part it takes in their mental life,

*It must be understood that there is no question of involuntary attention, which is natural, spontaneous; we have, moreover, made ourselves clear elsewhere on this point (see p. or et seqq.).

we shall see how rarely it occurs and for how short a time. If it were possible for a given period of time to compare in humanity, taken as a whole, the total number of acts produced by voluntary attention with the total number of those produced without it, the ratio would be nearly as zero to infinity. By reason of its very superiority of nature and its extreme complexity, it is a state, a co-ordination,* which can rarely come into existence and which always tends to dissolution as soon as it arises.

To confine ourselves to indubitable facts, is it not well known that an incapacity for sustained attention is one of the first symptoms of every impairment of the mind, whether temporary, as in fever, or permanent, as in madness? The highest form of co-ordination is therefore indeed the most unstable, even in the purely psychological order.

What is this law of dissolution, moreover, if not one instance of that great biological law already described in connexion with the memory: the functions acquired last are the first to degenerate. In the individual the automatic co-ordination precedes that born of the desires and passions, which itself precedes voluntary co-ordination, the simple forms of which precede the more complex ones. In the development of species (if the theory of evolution be admitted) the lower forms of activity for ages existed alone; then, with the increasing complexity of the co-ordinations, there came a time when there was will. A return to the reign of impulses, by whatever brilliant qualities

* Just as groups of simple movements have to be organised and co-ordinated to permit that higher co-ordination from which the delicate and complex movements arise, in like manner must groups of simple states of consciousness be organised, associated, and co-ordinated to permit that higher co-ordination which is the attention.

of mind it may be accompanied, is therefore in itself a *retrogression*. In this respect the following passage from Herbert Spencer will serve us as a summary and as a conclusion upon this point: "In the chronically nervous, whose blood, deteriorated in quality and feebly propelled, fails to keep up a due activity of molecular change, . . . irascibility . . . is matter of common remark; and irascibility implies a relative inactivity of the superior feelings. It results when a sudden discharge, sent by a pain or annoyance through those plexuses which adjust the conduct to painful and annoying agencies, is unaccompanied by a discharge through those plexuses which adjust the conduct to many circumstances instead of a single circumstance. That deficient genesis of nervous fluid accounts for this loss of emotional balance, is a corollary from all that has gone before. The plexuses which co-ordinate the defensive and destructive activities, and in which are seated the accompanying feelings of antagonism and anger, are inherited from all antecedent races of creatures and are therefore well organised—so well organised that the child in arms shows them in action. But the plexuses which, by connecting and co-ordinating a variety of inferior plexuses, adapt the behavior to a variety of external acquirements, have been but recently evolved; so that, besides being extensive and intricate, they are formed of much less permeable channels. Hence when the nervous system is not fully charged, these latest and highest structures are the first to fail. Instead of being instant to act, their actions, if appreciable at all, come too late to check the actions of the subordinate structures." *

* *Principles of Psychology*, vol. i, § 262.

II.

After having followed step by step the dissolution of the will, the fundamental result which has appeared to us to spring from it is that it is a co-ordination variable in complexity and degree; that this co-ordination is the condition of the existence of all volition, and that, according as it is totally or partially destroyed, volition is annihilated or impaired. It is upon this result that we would now like to insist, confining ourselves to brief indications on certain points, as it is not our aim to write a monograph of the will.

1) Let us examine in the first place the material conditions of this co-ordination. The will, which in some privileged persons attains a power so extraordinary and does such great things, has a very humble origin. This is found in that biological property inherent in all living matter and known as irritability, that is to say, reaction against external forces. Irritability—the physiological form of the law of inertia—is in somewise a state of primordial indifferentiation whence shall spring, by an ulterior differentiation, sensibility properly so called and motility, those two great bases of psychic life.

Let us remember that motility (which alone concerns us here) manifests itself, even in the vegetable kingdom, under divers forms: by the movements of certain spores, of the sensitive plant, of the *Dionæa*, and of many other plants to which Darwin has devoted a well-known work.—The protoplasmic mass, homogeneous in appearance, of which certain rudimentary beings are exclusively composed, is endowed with motility. The amœba and the white corpuscle of the

blood move ahead little by little by the aid of the processes which they emit. These facts, which may be found described in abundance in special works, show us that motility appears long before the muscles and the nervous system, even in their most rudimentary form.

We need not follow the evolution of these two instruments of improvement through the animal series. Let us merely note that the researches on the localisation of the motor centres, so important in the mechanism of the will, have led some savants to study the state of these centres in the newly born. "This investigation, very carefully made by Soltmann, in 1875, has furnished the following results. In rabbits and dogs there exists immediately after birth no point in the cerebral cortex the electric irritation of which is capable of producing movement. It is only on the tenth day that the centres for the anterior members develop. On the thirteenth day the centres for the posterior members appear. On the sixteenth, these centres are already quite distinct from each other and from those of the face. One conclusion to be drawn from these results is, that the absence of voluntary motor direction coincides with the absence of the appropriate organs, and that, in measure as the animal becomes more master of its movements, the cerebral centres in which the elaboration of will takes place acquire a more manifest independence.*

Flechsig and Parrot have studied the development of the encephalon in the fœtus and the infant. From the researches of the latter † it appears that, if one fol-

* *Dictionnaire encyclopédique des sciences médicales*, François-Franck, article "Nerveux," p. 585.

† *Archives de physiologie*, 1879, pp. 505-520.

lows the development of the white matter of an entire hemisphere, it can be seen to rise successively from the peduncle to the optic thalami, then to the internal capsule, to the hemispheric centre, and finally to the cerebral mantle. So those parts whose development is the slowest have the highest functional destiny.

The formative period passed, the mechanism of volitional action appears to be constituted in the following manner: the incitation starts from the regions of the cortical layer called motor (parieto-frontal region), and follows the pyramidal fasciculus, called *voluntary* by some authors. This fasciculus, which consists in the grouping of all the fibres arising in the motor convolutions, descends across the oval centre, forms a small part of the internal capsule, which, as we know, penetrates into the corpus striatum, "like a wedge into a piece of wood." This fasciculus follows the cerebral peduncle and the medulla, where it undergoes a more or less complete decussation, and passes down the opposite side of the spinal cord, thus constituting a great commissure between the motor convolutions and the grey matter of the cord from which the motor nerves are given out.* This rough sketch gives some idea of the complexity of the elements requisite for volitional action and the intimate solidarity which unites them.

There are, unfortunately, some differences of interpretation regarding the real nature of the cerebral centres whence the incitation starts. To Ferrier and many others they are motor centres, in the strict sense; that is to say, that in them and by them the movement

* Huguenin, *Anatomie des centres nerveux*, (translated from the German by Keller), Brissaud, *De la contracture permanente des hémiplegiques*, 1880, p. 9, et seq.

commences. Schiff, Hitzig and Nothnagel, Charlton Bastian, and Munk have given other interpretations which are neither equally probable nor equally clear. In general, however, they amount to a regarding of these centres as rather of "a sensory nature," the motor function proper being relegated to the striated bodies. "The nervous fibres that descend from the cerebral cortex, in higher animals and in man, down to the corpora striata, are in their nature strictly comparable with the fibres connecting the 'sensory' and the 'motor' cells in an ordinary nervous mechanism for reflex action."* In other words, there are supposed to exist in the cerebral cortex "circumscribed regions the experimental excitation of which produces in the opposite side of the body determinate localised movements. These points seem as if they should much rather be considered as centres of *voluntary association* than as motor centres, properly so called. They would in this view be the seat of incitements to voluntary movements and not the true points of departure of the motion. They ought rather to be assimilated to the peripheral organs of sense than to the motor apparatus of the anterior cornua of the medulla. . . . These centres would then be *psycho-motor*, because by their purely psychic action they command veritable motor apparatus. . . . We believe that the different points indicated as motor centres for the members, the face, etc., correspond to the apparatus which receive and transform into *voluntary* incitation the sensations of peripheral origin. They would thus be volitional centres and not true motor ones."†

Notwithstanding this pending question, the solu-

* Charlton Bastian, *Brain as an Organ of the Mind*, chapter xxvi.

† François-Franck, loc. cit., pp. 577, 578.

tion of which concerns psychology at least as much as physiology, and in spite of disagreements in detail that we have neglected, especially the uncertainties regarding the function of the cerebellum, we may say with Charlton Bastian that, "if since Hume's time we have not learned in any full sense of the term 'the means by which the motion of our bodies follows upon the command of our will,' we have at least learned something as to the parts chiefly concerned, and thus as to the paths traversed by volitional stimuli."*

2) In examining the question on its psychological side, volitional co-ordination assumes so many forms and is susceptible of so many gradations that only its principal stages can be noticed. It would be natural to begin with the lowest ; but I think it useful, for the sake of clearness, to follow the inverse order.

The most perfect co-ordination is that of the highest wills, of the great men of action, whatever be the order of their activity: Cæsar, or Michael Angelo, or St. Vincent de Paul. It may be summed up in a few words: unity, stability, power. The exterior unity of their life is in the unity of their aim, always pursued, creating according to circumstances new co-ordinations and adaptations. But this outer unity is itself only the expression of an interior unity, that of their character. It is because they remain the same that their end remains the same. Their fundamental element is a mighty, inextinguishable passion which enlists their ideas in its service. This passion is themselves ; it is the psychic expression of their constitution as nature has made it. So all that lies outside of this co-ordination, how it remains in the shade, inefficacious, sterile, forgotten, like a parasitic vegetation !

*Loc. cit.

They present the type of a life always in harmony with itself, because in them everything conspires together, converges, and consents. Even in ordinary life these characters are met with, without making themselves spoken of, because the elevation of aim, the circumstances, and especially the strength of the passion, have been lacking to them; they have preserved only its stability.—In another way, the great historic stoics, Epictetus, Thraseas, (I do not speak of their Sage, who is only an abstract ideal,) have realised this superior type of will under its negative form,—inhibition,—conformably to the maxim of the school: Endure and refrain.

Below this perfect co-ordination, there are lives traversed by intermission, whose centre of gravity, ordinarily stable, nevertheless oscillates from time to time. One group of tendencies makes a temporary secession with limited action, expressing, so far as they do exist and act, one side of the character. Neither for themselves nor for others have these individuals the unity of the great wills, and the more frequent and complex in nature are these infractions of perfect co-ordination, the more the volitional power diminishes. In reality, all these degrees are met with.

Descending still lower, we reach those lives by double entry, in which two contrary or merely different tendencies dominate in turn. There are in the individual two alternate centres of gravity, two points of convergence for successively preponderating but only partial co-ordinations. Taking everything together, that is perhaps the most common type, if one looks around one, and if one consults the poets and moralists of all times, who vie with each other in repeating that there are two men in us. The number of these successive

co-ordinations may be still larger ; but it would be idle to pursue this analysis further.

One step more, and we enter into pathology. Let us recall the sudden irresistible impulses which at every moment hold the will in check ; it is a hypertrophied tendency which continually breaks the equilibrium, and the intensity of which is too great to permit it any longer to be co-ordinated with the others ; it goes out of the ranks, it commands instead of being subordinated. Then when these impulses have come to be no longer an accident but a habit, no longer one side of the character but the character itself, there are henceforth only intermittent co-ordinations ; it is the will that becomes the exception.

Lower still, it becomes a mere accident. In the indefinite succession of impulses varying from one minute to the other a precarious volition finds with difficulty at long intervals its conditions of existence. Only caprices then exist. The hysteric character has furnished the type of this perfect *incoördination*. Here we reach the other extreme.

Beneath this there are no more diseases of the will, but an arrest of development which prevents it from ever arising. Such is the state of idiots and imbeciles. We will say a few words regarding them here in order to complete our pathological study.

“In profound idiocy,” says Griesinger, “efforts and determinations are always instinctive ; they are chiefly provoked by the need of nourishment ; most frequently they have the character of reflexes of which the individual is hardly conscious. Certain simple ideas may still provoke efforts and movements, for example, to play with little pieces of paper. . . . Without speaking of those who are plunged in the profoundest

idiocy, we ask ourselves: Is there in them anything that represents the will? What is there in them that can will?

"In many idiots of this last class the only thing that seems to arouse their minds a little is the desire to eat. The lowest idiots manifest this desire only by agitation and groans. Those in whom the degeneracy is less profound move their lips and hands a little, or else weep: it is thus that they express a desire to eat. . . .

"In slight idiocy the foundation of the character is inconstancy and obtuseness of feeling, and weakness of will. The disposition of these individuals depends upon their surroundings and the treatment they receive: it is docile and obedient when they are taken care of, ill-natured and malicious when they are badly treated."*

Before bringing this subject to an end, we will again remark that if the will is a co-ordination, that is to say a sum of relations, it may be predicted *a priori* that it will be produced much more rarely than the simpler forms of activity, because a complex state has much fewer chances of originating and enduring than a simple state. And such are the real facts in the case. If in each human life we count up what should be credited to the account of automatism, of habit, of the passions, and above all of imitation, we shall see that the number of acts that are purely voluntary, in

* Griesinger, *Traité des maladies mentales* (translated from the German), pp. 433, 434. For a complete study of the question consult the recent work by Father Sollier: *Psychologie de l'idiot et de l'imbécile*. It will be seen that in them the will cannot be formed because the conditions of its existence are lacking. The atrophy of the intellectual and affective faculties renders the apparition of voluntary activity impossible: which proves once more that it is not a primordial "faculty," but an acquired and complex state resulting from an evolution. These weak-minded persons cannot go beyond the period of reflexes, affective and intellectual; the world of will is a promised land into which they will never enter.

the strict sense of the word, is very small. For the majority of men, imitation suffices; they are contented with what *has been* will in others, and, as they think with the ideas of the world at large, they act with its will. Between the habits which render it useless and the maladies that mutilate or destroy it, the will, as we have said above, must be taken as a happy accident.

Is it necessary, finally, to remark how close a resemblance there is between this increasingly complex co-ordination of tendencies which forms the different stages of the will, and the increasingly complex co-ordination of perceptions and images which constitutes the various degrees of the intellect, one having for its basis and fundamental condition the character, and the other the "forms of thought"; both being a more or less complete adaptation of the being to its environment, in the order of action or in the order of knowledge?

* * *

We are now prepared for the general conclusion of this work, already indicated several times in passing. It will illuminate, I trust, with a retrospective light the road which we have traversed.

Volition is a final state of consciousness which results from the more or less complex co-ordination of a group of states, conscious, subconscious, or unconscious (purely physiological), which all united express themselves by an action or an inhibition. The principal factor in the co-ordination is the character, which is only the psychic expression of an individual organism. It is the character which gives to the co-ordination its unity,—not the abstract unity of a mathematical point, but the concrete unity of a consensus. The

act by which this co-ordination is made and affirmed is choice, founded on an affinity of nature.

The volition that subjective psychologists have so often observed, analysed, and commented upon is then for us only a simple state of consciousness. It is merely an effect of that psycho-physiological activity, so often described, only a part of which enters into consciousness under the form of a deliberation. Furthermore, *it is not the cause of anything*. The acts and movements which follow it result directly from the tendencies, feelings, images, and ideas which have become co-ordinated in the form of a choice. It is from this group that all the efficacy comes. In other terms,—and to leave no ambiguity,—the psycho-physiological labor of deliberation results on the one hand in a state of consciousness, the volition, and on the other in a set of movements or inhibitions. *The “I will” testifies to a condition, but does not produce it*. I should compare it to the verdict of a jury, which may be the result of a very long criminal examination, and of very passionate pleadings, and which will be followed by grave consequences extending over a long future, but *which is an effect without being a cause*, being in law only a simple statement.

If one insists on making of the will a faculty, an entity, all becomes obscurity, perplexity, contradiction. One is caught in the snare of a badly stated question. If, on the contrary, we accept the facts as they are, we disembararrass ourselves at least of factitious difficulties. One does not have to ask oneself, like Hume and so many others, how an “I will” can make my members move. This is a mystery which need not be cleared up, since it does not exist, as volition is in no degree a cause. It is in the natural tendency of feel-

ings and images to express themselves in movements that the secret of acts produced should be sought. We have here only an extremely complicated case of the law of reflexes, in which, between the period called that of excitation and the motor period there appears a most important psychic fact—volition—showing that the first period is ending and the second beginning.

Let it be remarked also how easily that strange malady called abulia can now be explained, and with it the analogous forms considered above,* and even that mere weakness of will, scarcely morbid, so frequent among persons who say that they will and yet do not act. It is because the individual organism, the source from which all springs, had two effects to produce and produces only one of them: the state of consciousness, choice, affirmation; while the motor tendencies are too weak to express themselves in acts. There is sufficient co-ordination, but insufficient impulse. In irresistible acts, on the contrary, it is the impulse which is exaggerated, and the co-ordination which grows weak or disappears.

We owe, therefore, to pathology two principal results: one, that the “I will” is in itself wholly without efficacy in causing action; the other, that the will in the rational man is an extremely complex and unstable co-ordination, fragile by its very superiority, because it is “the highest force which nature has yet developed—the last consummate blossom of all her marvellous works.” †

* See chapter i.

† Maudsley, *The Physiology of Mind*, p. 456.

INDEX.

- Abstract ideas, 8.
 Abulia, 28 et seq., 40 et seq., 77, 134.
 Adaptation, 19.
 Affinity, 21.
 Agoraphobia, 43.
 American quarryman, 69.
 Angelo, Michael, 128.
 Anger, 13.
 Aphasia, 120.
 Arithmomania, 58.
 Association, 84.
 Ataxia, moral, 88.
 Athos, Monks of Mount, 95.
 Automatism, 106, 110.
 Axenfeld, 89, 93.

 Barth, 53.
 Bastian, Charlton, 127, 128.
 Beaunis, 111.
 Bennett's case, Dr., 29.
 Berger, 103.
 Bernheim, 111.
Bhagavad-Gitâ, 53, 95.
 Billod, 32 et seq., 43, 56, 78.
 Brain, lesions of the, 68.
 Briquet, 92.
 Brissaud, 126.
 Brouardel, 111.
 Buddhists, 100.
 Burdach, 106.

 Cæsar, 128.
 Calmeil, 59.
 Caprices, 87.
 Carlyle, 76.
 Carpenter, 44, 72.
 Character, science of, 23, 112.
 Charcot, 42, 58, 111.

 Choice, 20 et seq.
 Coleridge, 72 et seq.
 Consciousness, abolition of, 103.
 Co-ordination, 113, 122; the will a,
 124-128.
 Cordes, 44.
 Cortex, lesion of the, 117 et seq.
 Cruveilhier, 93.
 Cyon, 11.

 Delbœuf, 52.
 De Quincey, Thomas, case of, 30 et
 seq.
 Desire, 4.
 Dietl, 68.
 Dipsomania, 61.
 Disease, 37.
 Diseases of speech, 120.
 Dissolution, 1, 115, 122; of the will,
 114.
 Doubting-insanity, 46.
 Drunkenness, 67, 76.
 Du Saulle, Legrand, 44, 46.

 Ecstasy, 94 et seq.
 Education, 17.
 Effort, the feeling of muscular, 49 et
 seq.; volitional, 50 et seq.
 Ego, the, 23, 24 et seq.; 66, 102.
 Epictetus, 129.
 Epileptics, 56.
 Erotomania, 61.
 Esquirol, 29, 38, 48.
 Ethnology, 23.
 Exner, 68.

 Fear of places, 43.
 Ferrier, 12, 50, 68, 71, 80, 85, 116, 126.

Fixed ideas, 6, 58, 92.
 Flechsig, 125.
 Fontana, 20.
 Fournier, 119.
 Foville, 55, 62, 117, 119.
 Franck (François), 14, 127.
 Free will, 2, 111.
 Frontal convolutions, lesion of, 68.
 Fumbling mania (*Grübelnsucht*), 46.

Gilles de la Tourette, 111.
 Glénadel, case of, 59.
 Goltz, 11, 117.
 Griesinger, Wilhelm, 29, 46, 130.
Grübelnsucht, 46.
 Guislain, 28, 48, 59.

Hazlitt, 76.
 Heart, the, 10.
 Heidenhain, 103, 108.
 Helvetius, 82.
 Herzen, 11.
 Hitzig, 127.
 Homicidal impulses, 58 et seq.
 Huchard, Dr., 86, 89, 93.
 Huguenin, 126.
 Hypnotism, 103 et seq.
 Hysterics, 86 et seq.

Ideas, 6.
 Ideo-motor, 5, 113.
 Idiocy, 130 et seq.
 Incoördination, 89, 130.
 Inhibition, 10-18, 83.
 Intellect, the, 19.
 Intellectual adaptation, 54 et seq.
 Irresistible impulses, 61.
 Irresolution, 26.
 Italian woman, case of young, 38.

Jackson, Hughlings, 115.
 James, W., 49.
 Janet, Pierre, 42.
 Judgment, 20.

Kant, 2.
 Kleptomania, 61.
 Kräpelin, 68.

Lateau, Louise, 100.
 Lépine, 69.

Lesions of the brain, 68, 117 et seq.
 Lethargy, 104.
 Leubuscher, 29.
 Lewes, 10, 12, 80, 83.
 Liébault, 111.
 Liégeois, 111.
 Luys, 55.
 Lypemania, 41.

Macario, 93.
 Magistrate, case of a, 29.
 Magnan, 58.
 Marc, 58.
 Marseilles, 33, 35.
 Maudsley, 10, 44, 61, 80, 134.
 Melancholia, 41.
 Memory, 1.
 Meschede, 64.
 Mesnet, 105.
 Metaphysical mania, 46.
 Metaphysics, 2.
 Mill, John Stuart, 23.
 Moerl, Maria von, 100.
 Monks of Mount Athos, 95.
 Moral ataxia, 88.
 Moreau, 77, 88.
 Morel, 47, 61.
 Motor, elements, 5; images, 41 et seq.
 Müller, Max, 121.
 Munk, 127.
 Mystics, 96 et seq.

Nirvâna, 95, 100.
 Nothnagel, 127.

Obersteiner, 68.
 Ogle, W., 120.
 Om, 95.
 Omphalopsychi, 95.
 Onomatomania, 58.
 Opium, abuse of, 30.

Paralytics, 78.
 Parrot, 125.
 Passions, 7.
 Pathology, 112, 134; of the will, 28 et seq.
 Perez, B., 16.
 Personality, the, 102.
 Pius IX., 36.
 Places, fear of, 43.

- Plotinus, 99, 100, 102.
 Prayer, 96.
 Preyer, 103.
 Psychic paralyses, 42.
 Pyromania, 61.

 Rapture, 100.
 Rational activity, 7.
 Reflexes, 4, 19, 113.
 Renouvier, 2.
 Retrogression, 123.
 Reynolds, 42.
 Richer, P., 93, 105, 107.
 Richet, Ch., 52, 87, 93, 104, 107.
 Ritti, 46.
 Rosenthal, 57.
 Rumpf, 103.

 Saint-Hilaire, Barth., 95.
 Schiff, 11, 127.
 Schneider, 3, 103.
 Schüle, 61.
 Sergi, 80.
 Setschenow, 11.
 Sollier, Father, 131.
 Soltmann, 125.
 Somnambulism, 103, 110.
 Speech, diseases of, 120.
 Spencer, Herbert, 115, 123.
 Spinal being, 3.
 Spinoza, 111.
 Spontaneous attention, 79 et seq.
 Starr, Allen, 70.
 St. Peter, feast of, 36.
 St. Teresa, 96 et seq.
 St. Vincent de Paul, 123.
 Suicidal monomania, 61.
 Sydenham, 87.

 Tauler, 99.
 Thraseas, 129.
 Trélat, 61.
 Trousseau, 120.

 Unity, of aim, 128; of volition, 132.

 Vintschgau, 68.
 Virchow, 3.
 Volition, 22, 112; the last term of a progressive evolution, 113; defined, 132; unity of, 132.
 Volitional, effort, 50 et seq.; action, mechanism of, 126; co-ordination, 128.
 Voluntary act, composed of two elements, 39.
 Voluntary attention, impairments of, 72; acquired impairment of, 76 et seq., 79 et seq.

 Weber, E. F., 20.
 Westphal, 43, 63.
 Will, the term, 1; defined, 9, 25 et seq., 112; pathology of the, 28 et seq.; impairment of the, by defect of impulse, 28 et seq.; impairment of the, by excess of impulse, 54 et seq.; causes of impotence of the, 37; paralysis of the, 44; the, its evolution, 64; impotence of the, 93; the extinction of the, 94; annihilation of the, 105; pathology of the, 112; dissolution of the, 114; the, a co-ordination, 124.
 Winslow, Forbes, 78.
 Wundt, 12, 80.

 Yogi, 95.



THE OPEN COURT

A WEEKLY MAGAZINE

DEVOTED TO THE RELIGION OF SCIENCE

THE OPEN COURT does not understand by religion any creed or dogmatic belief, but man's world-conception in so far as it regulates his conduct.

The old dogmatic conception of religion is based upon the science of past ages; to base religion upon the maturest and truest thought of the present time is the object of *The Open Court*. Thus, the religion of *The Open Court* is the Religion of Science, that is, the religion of verified and verifiable truth.

Although opposed to irrational orthodoxy and narrow bigotry, *The Open Court* does not attack the properly religious element of the various religions. It criticises their errors unflinchingly but without animosity, and endeavors to preserve of them all that is true and good.

The current numbers of *The Open Court* contain valuable original articles from the pens of distinguished thinkers. Accurate and authorised translations are made in Philosophy, Science, and Criticism from the periodical literature of Continental Europe, and reviews of noteworthy recent investigations are presented.

Terms: \$1.00 a year; \$1.50 to foreign countries in the Postal Union, Single Copies, 5 cents.

THE MONIST

A QUARTERLY MAGAZINE OF

PHILOSOPHY AND SCIENCE.

THE MONIST discusses the fundamental problems of Philosophy in their practical relations to the religious, ethical, and sociological questions of the day. The following have contributed to its columns:

PROF. JOSEPH LE CONTE,	PROF. G. J. ROMANES,	PROF. C. LOMBROSO.
DR. W. T. HARRIS,	PROF. C. LLOYD MORGAN,	PROF. E. HAECKEL,
M. D. CONWAY,	JAMES SULLY,	PROF. H. HÖFFDING,
CHARLES S. PEIRCE,	B. BOSANQUET,	DR. F. OSWALD,
PROF. F. MAX MÜLLER,	DR. A. BINET,	PROF. J. DELBEUF,
PROF. E. D. COPE,	PROF. ERNST MACH,	PROF. F. JODL,
CARUS STERNE,	RABBI EMIL HIRSCH,	PROF. H. M. STANLEY.
MRS. C. LADD FRANKLIN,	LESTER F. WARD.	G. FERRERO,
PROF. MAX VERWORN,	PROF. H. SCHUBERT,	J. VENN,
PROF. FELIX KLEIN,	DR. EDM. MONTGOMERY,	PROF. H. VON HOLST.

Per Copy, 50 cents; Yearly, \$2.00. In England and all countries in U.P.U. per Copy, 2s 6d; Yearly, 9s 6d.

CHICAGO:

THE OPEN COURT PUBLISHING CO.,

Monon Building, 324 Dearborn Street.

LONDON ADDRESS: 17 Johnson's Court, Fleet St., E. C.

CATALOGUE OF PUBLICATIONS

OF THE

OPEN COURT PUBLISHING CO.

COPE, E. D.

THE PRIMARY FACTORS OF ORGANIC EVOLUTION.

121 cuts. Pp., xvi, 547. Cloth, \$2.00.

MÜLLER, F. MAX.

THREE INTRODUCTORY LECTURES ON THE SCIENCE OF THOUGHT.

With a correspondence on "Thought Without Words," between F. Max Müller and Francis Galton, the Duke of Argyll, George J. Romanes and others. 128 pages. Cloth, 75 cents. Paper, 25 cents.

THREE LECTURES ON THE SCIENCE OF LANGUAGE.

The Oxford University Extension Lectures, with a Supplement, "My Predecessors." 112 pages. 2nd Edition. Cloth, 75 cents. Paper, 25c.

ROMANES, GEORGE JOHN.

DARWIN AND AFTER DARWIN.

An Exposition of the Darwinian Theory and a Discussion of Post-Darwinian Questions. Two Vols., \$3.00. Singly, as follows:

1. THE DARWINIAN THEORY. 460 pages. 125 illustrations. Cloth, \$2.00.
2. POST-DARWINIAN QUESTIONS. Ed. by C. L. Morgan. Pp. 338. Cl. \$1.50.

AN EXAMINATION OF WEISMANNISM

236 pages. Cloth, \$1.00. Paper, 35c

THOUGHTS ON RELIGION.

Edited by Charles Gore, M. A., Canon of Westminster. Third Edition. Pages, 184. Cloth, gilt top, \$1.25.

RIBOT, TH.

THE PSYCHOLOGY OF ATTENTION.

THE DISEASES OF PERSONALITY.

THE DISEASES OF THE WILL.

Authorised translations. Cloth, 75 cents each Paper, 25 cents *Full set, cloth, \$1.75.*

MACH, ERNST.

THE SCIENCE OF MECHANICS.

A CRITICAL AND HISTORICAL EXPOSITION OF ITS PRINCIPLES. Translated by T. J. McCORMACK. 250 cuts. 518 pages ½ m., gilt top \$2.50.

POPULAR SCIENTIFIC LECTURES.

313 pages. Cloth, gilt top. Net, \$1.00.

THE ANALYSIS OF THE SENSATIONS (In preparation.)

GOODWIN, REV. T. A.

LOVERS THREE THOUSAND YEARS AGO.

As Indicated by the Song of Solomon. Enfield paper. Pp. 42. 50c.

CORNILL, CARL HEINRICH.

THE PROPHETS OF ISRAEL.

Popular Sketches from Old Testament History. Pp., 210 Cloth, \$1.00.

THE RISE OF THE PEOPLE OF ISRAEL.

See *Epitomes of Three Sciences*, below.

BINET, ALFRED.

THE PSYCHIC LIFE OF MICRO-ORGANISMS.

Authorised translation. 135 pages. Cloth, 75 cents; Paper, 25 cents.

ON DOUBLE CONSCIOUSNESS.

Studies in Experimental Psychology. 93 pages. Paper, 15 cents.

WEISMANN, AUGUST

GERMINAL SELECTION. AS A SOURCE OF DEFINITE VARIATION
Paper, 25c.

NOIRÉ, LUDWIG.

ON THE ORIGIN OF LANGUAGE Paper, 15c.

FREYTAG, GUSTAV.

THE LOST MANUSCRIPT. A Novel
2 vols. 953 pages. Extra cloth, \$4.00 One vol., cl., \$1.00; paper, 75c

HERING, EWALD.

ON MEMORY, and THE SPECIFIC ENERGIES OF THE NERVOUS SYSTEM. Paper, 15c.

TRUMBULL, M. M.

THE FREE TRADE STRUGGLE IN ENGLAND.

Second Edition. 296 pages. Cloth, 75 cents; paper, 25 cents.

WHEELBARROW: ARTICLES AND DISCUSSIONS ON THE LABOR QUESTION.

With portrait of the author. 303 pages. Cloth, \$1.00; paper, 35 cents.

EARL GREY ON RECIPROCITY AND CIVIL SERVICE REFORM.

With Comments by Gen. M. M. Trumbull. Price, 10 cents.

GOETHE AND SCHILLER'S XENIONS.

Selected and translated by Paul Carus. Album form. Pp., 162. Cl., \$1.00.

CARUS, PAUL.

THE ETHICAL PROBLEM.

90 pages. Cloth, 50 cents; Paper, 30 cents.

FUNDAMENTAL PROBLEMS.

Second edition, enlarged and revised. 372 pp. Cl., \$1.50. Paper, 50c.

HOMILIES OF SCIENCE.

310 pages. Cloth, Gilt Top, \$1.50.

THE IDEA OF GOD.

32 pages. Paper, 15 cents.

THE SOUL OF MAN.

With 152 cuts and diagrams. 458 pages. Cloth, \$3.00.

TRUTH IN FICTION. TWELVE TALES WITH A MORAL.

Fine laid paper, white and gold binding, gilt edges. Pp. 128. \$1.00

THE RELIGION OF SCIENCE.

Extra edition. Price, 50 cents R. S. L. edition, 25c.

PRIMER OF PHILOSOPHY.

240 pages. Second Edition. Cloth, \$1.00. Paper, 25c.

THE PHILOSOPHY OF THE TOOL.

Pages, 24. Paper, illustrated cover, 10c.

OUR NEED OF PHILOSOPHY.

Pages, 14. Paper, 5c.

SCIENCE A RELIGIOUS REVELATION.

Pages, 21. Paper, 5c.

THE GOSPEL OF BUDDHA. According to Old Records.

4th Edition. Pp., 275. Cloth, \$1.00. Paper, 35 cents. In German, \$1.25

KARMA. A STORY OF EARLY BUDDHISM.

Illustrated by Japanese artists. Crêpe paper, 75 cents.

GARBE, RICHARD.

THE REDEMPTION OF THE BRAHMAN. A TALE OF HINDU LIFE.

Laid paper. Veg. parch. binding. Gilt top 96 pages. Price, 75 cents.

EPITOMES OF THREE SCIENCES.

1. **THE STUDY OF SANSKRIT.** By *H. Oldenberg*.
2. **EXPERIMENTAL PSYCHOLOGY.** By *Joseph Jastrow*.
3. **THE RISE OF THE PEOPLE OF ISRAEL.** By *C. H. Cornill*. 140 pages. Cloth, 75 cents.

The Religion of Science Library.

A collection of bi-monthly publications, most of which are reprints of books published by The Open Court Publishing Company. Yearly, \$1.50. Separate copies according to prices quoted. The books are printed upon good paper, from large type.

The Religion of Science Library, by its extraordinarily reasonable price, will bring a large number of valuable books within the reach of all readers.

The following have already appeared in the series:

- No 1. *The Religion of Science.* By PAUL CARUS. 25c.
2. *Three Introductory Lectures on the Science of Thought.*
By F. MAX MÜLLER. 25c.
3. *Three Lectures on the Science of Language.* By F. MAX MÜLLER. 25c.
4. *The Diseases of Personality.* By TH. RIBOT. 25c.
5. *The Psychology of Attention.* By TH. RIBOT. 25c.
6. *The Psychic Life of Micro-Organisms.* By ALFRED BINET. 25c.
7. *The Nature of the State.* By PAUL CARUS. 15c.
8. *On Double Consciousness.* By ALFRED BINET. 15c.
9. *Fundamental Problems.* By PAUL CARUS. 50c.
10. *The Diseases of the Will.* By TH. RIBOT. 25c.
11. *The Origin of Language.* By LUDWIG NOIRÉ. 15c.
12. *The Free Trade Struggle in England.* By M. M. TRUMBULL. 25c.
13. *Wheelbarrow on the Labor Question.* By M. M. TRUMBULL. 35c.
14. *The Gospel of Buddha.* By PAUL CARUS. 35c.
15. *The Primer of Philosophy.* By PAUL CARUS. 25c.
16. *On Memory, and The Specific Energies of the Nervous System.* By PROF. EWALD HERING. 15 cents.
17. *The Redemption of the Brahman.* A Tale of Hindu Life. By RICHARD GARBE. 25 cents.
18. *An Examination of Weismannism.* By G. J. ROMANES. 35c.
19. *On Germinal Selection.* By PROF. AUGUST WEISMANN. 25c.
20. *Lovers Three Thousand Years Ago.* By T. A. GOODWIN. 15c.

The following are in preparation:

The Philosophy of Ancient India. By PROF. RICHARD GARBE.
Buddhism and Christianity. By PAUL CARUS.
The Lost Manuscript. A Novel. By GUSTAV FREYTAG.
Old Testament History. By PROF. C. H. CORNILL.

THE OPEN COURT PUBLISHING CO.

324 DEARBORN STREET, CHICAGO, ILL.

LONDON ADDRESS: 17 Johnson's Court, Fleet St., E. C.



UNIVERSITY OF ILLINOIS-URBANA



3 0112 078704571